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# University of Toronto



## CALENDAR

1914 - - 1915








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THE  
CALENDAR

OF THE

University of Toronto

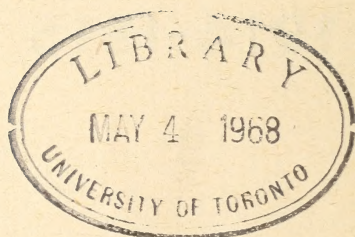
FOR THE YEAR

1914-1915



UNIVERSITY PRESS  
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1913-1914.

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<i>Librarian</i> . . . . .	HUGH HORNBY LANGTON, M.A.
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<i>Manager of the University Press</i> . . . . .	RICHARD J. HAMILTON, B.A.

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<i>Dean</i> . . . . .	ALFRED BAKER, M.A.
<i>Secretary</i> . . . . .	JAMES BREBNER, B.A.

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<i>Treasurer</i> . . . . .	HON. GEORGE ALBERTUS COX (OB.)
<i>Dean of Residence</i> . . . . .	CHARLES VINCENT MASSEY, B.A.
<i>Dean of Annesley Hall</i> . . . . .	MISS M. E. T. ADDISON, B.A.

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*Bursar* . . . . . SYDNEY H. JONES, ESQ.  
*Principal of St. Hilda's College* . . . . . MISS MABEL CARTWRIGHT, B.A.

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*Assistant Superior* . . . . . REV. DANIEL CUSHING.  
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*Registrar* . . . . . REV. HENRY CARR, B.A.

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*Secretary* . . . . . CLARA CYNTHIA BENSON, PH.D.

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*Dean* . . . . . WILLIAM PAKENHAM, B.A.  
*Secretary* . . . . . ORLANDO JOHN STEVENSON, M.A., D.PAED.



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*President* . . ROBERT ALEXANDER FALCONER, M.A., LL.D., D.LITT., C.M.G.  
*Dean* . . . . . BERNHARD EDUARD FERNOW, LL.D.  
*Secretary* . . . . .

NOTE—Communications relating to standing in all Faculties and Departments and to curricula, instruction and examinations in Graduate Courses, Law, Dentistry, Pharmacy, Agriculture, Music, Pedagogy, Gymnastics and Drill, and Veterinary Science are to be addressed to the Registrar of the University; correspondence regarding curricula, instruction and examinations in a particular Faculty is to be sent to the Secretary of that Faculty, while enquiries with reference to College instruction and residence are to be addressed to the Registrar of the College concerned.

1914

## CALENDAR

1914

JANUARY		FEBRUARY		MARCH		APRIL	
Sun.	4 11 18 25	Sun.	1 8 15 22	Sun.	1 8 15 22 29	Sun.	5 12 19 26
Mon.	5 12 19 26	Mon.	2 9 16 23	Mon.	2 9 16 23 30	Mon.	6 13 20 27
Tues.	6 13 20 27	Tues.	3 10 17 24	Tues.	3 10 17 24 31	Tues.	7 14 21 28
Wed.	7 14 21 28	Wed.	4 11 18 25	Wed.	4 11 18 25 ..	Wed.	1 8 15 22 29
Thur.	1 8 15 22 29	Thur.	5 12 19 26	Thur.	5 12 19 26 ..	Thur.	2 9 16 23 30
Fri.	2 9 16 23 30	Fri.	6 13 20 27	Fri.	6 13 20 27 ..	Fri.	3 10 17 24 ..
Sat.	3 10 17 24 31	Sat.	7 14 21 28	Sat.	7 14 21 28 ..	Sat.	4 11 18 25 ..
MAY		JUNE		JULY		AUGUST	
Sun.	3 10 17 24 31	Sun.	7 14 21 28	Sun.	5 12 19 26	Sun.	2 9 16 23 30
Mon.	4 11 18 25 ..	Mon.	1 8 15 22 29	Mon.	6 13 20 27	Mon.	3 10 17 24 31
Tue.	5 12 19 26 ..	Tues.	2 9 16 23 30	Tues.	7 14 21 28	Tues.	4 11 18 25 ..
Wed.	6 13 20 27 ..	Wed.	3 10 17 24 ..	Wed.	1 8 15 22 29	Wed.	5 12 19 26 ..
Thur.	7 14 21 28 ..	Thur.	4 11 18 25 ..	Thur.	2 9 16 23 30	Thur.	6 13 20 27 ..
Fri.	1 8 15 22 29 ..	Fri.	5 12 19 26 ..	Fri.	3 10 17 24 31	Fri.	7 14 21 28 ..
Sat.	2 9 16 23 30 ..	Sat.	6 13 20 27 ..	Sat.	4 11 18 25 ..	Sat.	1 8 15 22 29 ..
SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
Sun.	6 13 20 27	Sun.	4 11 18 25	Sun.	1 8 15 22 29	Sun.	6 13 20 27
Mon.	7 14 21 28	Mon.	5 12 19 26	Mon.	2 9 16 23 30	Mon.	7 14 21 28
Tues.	1 8 15 22 29	Tues.	6 13 20 27	Tues.	3 10 17 24 31	Tues.	1 8 15 22 29
Wed.	2 9 16 23 30	Wed.	7 14 21 28	Wed.	4 11 18 25 ..	Wed.	2 9 16 23 30
Thur.	3 10 17 24 ..	Thur.	1 8 15 22 29	Thur.	5 12 19 26 ..	Thur.	3 10 17 24 31
Fri.	4 11 18 25 ..	Fri.	2 9 16 23 30	Fri.	6 13 20 27 ..	Fri.	4 11 18 25 ..
Sat.	5 12 19 26 ..	Sat.	3 10 17 24 31	Sat.	7 14 21 28 ..	Sat.	5 12 19 26 ..

1915

## CALENDAR

1915

JANUARY		FEBRUARY		MARCH		APRIL	
Sun.	3 10 17 24 31	Sun.	7 14 21 28	Sun.	7 14 21 28	Sun.	4 11 18 25
Mon.	4 11 18 25 ..	Mon.	1 8 15 22 ..	Mon.	1 8 15 22 29	Mon.	5 12 19 26
Tues.	5 12 19 26 ..	Tues.	2 9 16 23 ..	Tues.	2 9 16 23 30	Tues.	6 13 20 27
Wed.	6 13 20 27 ..	Wed.	3 10 17 24 ..	Wed.	3 10 17 24 31	Wed.	7 14 21 28
Thur.	7 14 21 28 ..	Thurs.	4 11 18 25 ..	Thur.	4 11 18 25 ..	Thur.	1 8 15 22 29
Fri.	1 8 15 22 29 ..	Fri.	5 12 19 26 ..	Fri.	5 12 19 26 ..	Fri.	2 9 16 23 30
Sat.	2 9 16 23 30 ..	Sat.	6 13 20 27 ..	Sat.	6 13 20 27 ..	Sat.	3 10 17 24 ..
MAY		JUNE		JULY		AUGUST	
Sun.	2 9 16 23 30	Sun.	6 13 20 27	Sun.	4 11 18 25	Sun.	1 8 15 22 29
Mon.	3 10 17 24 31	Mon.	7 14 21 28	Mon.	5 12 19 26	Mon.	2 9 16 23 30
Tues.	4 11 18 25 ..	Tues.	1 8 15 22 29	Tues.	6 13 20 27	Tues.	3 10 17 24 31
Wed.	5 12 19 26 ..	Wed.	2 9 16 23 30	Wed.	7 14 21 28	Wed.	4 11 18 25 ..
Thur.	6 13 20 27 ..	Thur.	3 10 17 24 ..	Thur.	1 8 15 22 29	Thur.	5 12 19 26 ..
Fri.	7 14 21 28 ..	Fri.	4 11 18 25 ..	Fri.	2 9 16 23 30	Fri.	6 13 20 27 ..
Sat.	1 8 15 22 29 ..	Sat.	5 12 19 26 ..	Sat.	3 10 17 24 31	Sat.	7 14 21 28 ..
SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
Sun.	5 12 19 26	Sun.	3 10 17 24 31	Sun.	7 14 21 28	Sun.	5 12 19 26
Mon.	6 13 20 27	Mon.	4 11 18 25 ..	Mon.	1 8 15 22 29	Mon.	6 13 20 27
Tues.	7 14 21 28	Tues.	5 12 19 26 ..	Tues.	2 9 16 23 30	Tues.	7 14 21 28
Wed.	1 8 15 22 29	Wed.	6 13 20 27 ..	Wed.	3 10 17 24 ..	Wed.	1 8 15 22 29
Thur.	2 9 16 23 30	Thur.	7 14 21 28 ..	Thur.	4 11 18 25 ..	Thur.	2 9 16 23 30
Fri.	3 10 17 24 ..	Fri.	1 8 15 22 29 ..	Fri.	5 12 19 26 ..	Fri.	3 10 17 24 31
Sat.	4 11 18 25 ..	Sat.	2 9 16 23 30 ..	Sat.	6 13 20 27 ..	Sat.	4 11 18 25 ..



## CALENDAR, 1914-15.

- 1914—July 1 Wednesday... University Buildings closed.
- July 2 Thursday..... Summer Session begins.
- July 9 Thursday..... Meeting of the Land, Finance and Executive Committee of Trinity College.
- Aug. 1 Saturday..... Last day for receiving applications for the September Examinations in Arts.
- Aug. 6 Thursday..... Meeting of the Land, Finance and Executive Committee of Trinity College.
- Aug. 7 Friday..... Summer Session closes.
- Sept. 1 Tuesday..... Last day for receiving applications for the Supplemental Matriculation Examination.
- Sept. 1 Tuesday..... Last day for receiving applications for the September Examinations in Medicine and Applied Science.
- Sept. 7 Monday..... Labour Day. University Buildings closed.
- Sept. 8 Tuesday..... Supplemental Junior Matriculation Examination—conducted by the University Matriculation Board begins.
- Sept. 9 Wednesday... Supplemental Examinations in Arts begin.
- Sept. 10 Thursday..... Meeting of the Land, Finance and Executive Committee of Trinity College.
- Sept. 14 Monday..... Supplemental Examinations in Medicine begin.
- Sept. 15 Tuesday..... Registration in Medicine by the Secretary of the Faculty of Medicine.
- Sept. 18 Friday..... Supplemental Examinations in Applied Science begin.
- Sept. 25 Friday..... Meeting of University College Council.
- Sept. 25 Friday..... Meeting of the Council of the Faculty of Medicine.
- Sept. 25 Friday..... Meeting of the Council of the Faculty of Applied Science and Engineering.
- Sept. 26 Saturday..... Meeting of the Faculty of Arts of Victoria College.
- Sept. 28 Monday..... Enrolment in classes by the various Professors begins at 9.00 a.m.
- Sept. 28 Monday..... Meeting of the Council of the Faculty of Arts.
- Sept. 28 Monday..... Meeting of the College Committee of Trinity College.
- Sept. 29 Tuesday..... Academic Year begins at 9.00 a.m.
- Sept. 29 Tuesday..... The opening address by the President to the students of all the Faculties at 3 p.m., in Convocation Hall.

- 1914—Sept. 29 Tuesday.....Last day for the completion of registration  
in person for the Session 1914-1915.
- Sept. 29 Tuesday.....Enrolment in classes for the Session 1914-  
1915 to be completed at 5 p.m.
- Sept. 29 Tuesday.....Last day for receiving Vacation Work in  
Applied Science.
- Sept. 30 Wednesday...Lectures begin at 9.00 a.m.
- Sept. 30 Wednesday...Meeting of the Faculty of Arts of Victoria  
College.
- Oct. 2 Friday.....Meeting of University College Council.
- Oct. 2 Friday.....Meeting of the Senate of Victoria College.
- Oct. 2 Friday.....Meeting of the Council of the Faculty of  
Medicine.
- Oct. 2 Friday.....Meeting of the Council of the Faculty of  
Applied Science and Engineering.
- Oct. 2 Friday.....Meeting of the Council of the Faculty of  
Education.
- Oct. 5 Monday.....Meeting of the Council of the Faculty of  
Arts.
- Oct. 8 Thursday.....Meeting of the Land, Finance and Execu-  
tive Committee of Trinity College.
- Oct. 9 Friday.....Meeting of Senate.
- Oct. 10 Saturday.....Stated meeting of the Caput to deal with  
requests as to social functions until  
Nov. 15.
- Oct. 15 Thursday.....Charter Day, Victoria College.
- Oct. 26 Monday.....Meeting of the College Committee of  
Trinity College.
- Nov. 4 Wednesday...Meeting of the Faculty of Arts of Victoria  
College.
- Nov. 5 Thursday.....Meeting of the Land, Finance and Execu-  
tive Committee of Trinity College.
- Nov. 6 Friday.....Meeting of University College Council.
- Nov. 6 Friday.....Meeting of the Senate of Victoria College.
- Nov. 6 Friday.....Meeting of the Council of the Faculty of  
Applied Science and Engineering.
- Nov. 6 Friday.....Meeting of the Council of the Faculty of  
Education.
- Nov. 9 Monday.....Meeting of the Council of the Faculty of  
Arts.
- Nov. 13 Friday.....Term Meeting of Senate.
- Nov. 18 Wednesday...Annual General Business Meeting of the  
Convocation of Trinity College.
- Nov. 19 Thursday.....Annual General Meeting of the Corporation  
of Trinity College.
- Nov. 30 Monday.....Meeting of the College Committee of  
Trinity College.
- Dec. 1 Tuesday.....Last day for receiving applications for the  
January Examinations in Arts.



- 1914—Dec. 2 Wednesday... Meeting of the Faculty of Arts of Victoria College.
- Dec. 4 Friday..... Meeting of University College Council.
- Dec. 4 Friday..... Meeting of the Senate of Victoria College.
- Dec. 4 Friday..... Meeting of the Council of the Faculty of Medicine.
- Dec. 4 Friday..... Meeting of the Council of the Faculty of Applied Science and Engineering.
- Dec. 4 Friday..... Meeting of the Council of the Faculty of Education.
- Dec. 7 Monday..... Meeting of the Council of the Faculty of Arts.
- Dec. 10 Thursday..... Meeting of the Land, Finance and Executive Committee of Trinity College.
- Dec. 11 Friday..... Meeting of the Senate.
- Dec. 14-18 Monday-Friday..... Term Examinations.
- Dec. 18 Friday..... Last day of Lectures. Term ends at 12 noon.
- Dec. 18 Friday..... Railway certificates issued at 12 noon.
- Dec. 21 Monday..... Meeting of the College Committee of Trinity College.
- Dec. 25 Friday..... University Buildings closed.
- 1915—Jan. 1 Friday..... University Buildings closed.
- Jan. 2 Saturday..... Supplemental Examinations in Arts begin.
- Jan. 4 Monday..... Meeting of the Faculty of Arts of Victoria College.
- Jan. 4 Monday..... Meeting of University College Council.
- Jan. 4 Monday..... Meeting of the Council of the Faculty of Arts.
- Jan. 5 Tuesday..... Easter Term begins.
- Jan. 5 Tuesday..... Last day for receiving Thesis for B.A.Sc.
- Jan. 7 Thursday..... Meeting of the Land, Finance and Executive Committee of Trinity College.
- Jan. 8 Friday..... Assembly of the Students of all Faculties in Convocation Hall at 12.10 p.m.
- Jan. 8 Friday..... Meeting of Senate.
- Jan. 8 Friday..... Meeting of the Council of the Faculty of Applied Science and Engineering.
- Jan. 8 Friday..... Meeting of the Council of the Faculty of Education.
- Jan. 15 Friday..... Inauguration Day, Trinity College.
- Jan. 25 Monday..... Meeting of the College Committee of Trinity College.
- Feb. 3 Wednesday... Meeting of the Faculty of Arts of Victoria College.
- Feb. 4 Thursday..... Meeting of the Land, Finance and Executive Committee of Trinity College.

- 1915—Feb. 5 Friday.....Meeting of University College Council.  
 Feb. 5 Friday.....Meeting of the Senate of Victoria College.  
 Feb. 5 Friday.....Meeting of the Council of the Faculty of  
 Medicine.  
 Feb. 5 Friday.....Meeting of the Council of the Faculty of  
 Applied Science and Engineering.  
 Feb. 5 Friday.....Meeting of the Council of the Faculty of  
 Education.  
 Feb. 8 Monday.....Meeting of the Council of the Faculty of  
 Arts.  
 Feb. 12 Friday.....Meeting of Senate.  
 Feb. 22 Monday.....Meeting of the College Committee of  
 Trinity College.  
 Mar. 3 Wednesday...Meeting of the Faculty of Arts of Victoria  
 College.  
 Mar. 4 Thursday.....Meeting of the Land, Finance and Execu-  
 tive Committee of Trinity College.  
 Mar. 5 Friday.....Meeting of University College Council.  
 Mar. 5 Friday.....Meeting of the Senate of Victoria College.  
 Mar. 5 Friday.....Meeting of the Council of the Faculty of  
 Applied Science and Engineering.  
 Mar. 5 Friday.....Meeting of the Council of the Faculty of  
 Education.  
 Mar. 8 Monday.....Meeting of the Council of the Faculty of  
 Arts.  
 Mar. 12 Friday.....Meeting of Senate.  
 Mar. 15 Monday.....Last day for receiving applications for  
 Annual Examinations in Arts, Medicine  
 and Law.  
 Mar. 29 Monday.....Meeting of the College Committee of  
 Trinity College.  
 Mar. 31 Wednesday...Meeting of the Faculty of Arts of Victoria  
 College.  
 Mar. 31 Wednesday...Last day for submitting LL.B. theses.  
 Apr. 1 Thursday.....Last day for submitting M.A. theses.  
 Apr. 1 Thursday.....Meeting of the Council of the Faculty of  
 Applied Science and Engineering.  
 Apr. 1 Thursday.....Meeting of the Council of the Faculty of  
 Education.  
 Apr. 2 Friday.....University Buildings closed.  
 Apr. 5 Monday.....Meeting of University College Council.  
 Apr. 5 Monday.....Meeting of the Council of the Faculty of  
 Arts.  
 Apr. 8 Thursday.....Meeting of the Land, Finance and Execu-  
 tive Committee of Trinity College.  
 Apr. 8 Thursday.....Lectures and practical work close in  
 Applied Science.



- 1915—Apr. 9 Friday . . . . . Meeting of the Council of the Faculty of Medicine.
- Apr. 9 Friday . . . . . Term Meeting of Senate.
- Apr. 12 Monday . . . . . Annual Examinations in Applied Science begin.
- Apr. Monday-  
19-23 Friday . . . . . Term Examinations in Arts.
- Apr. 23 Friday . . . . . Lectures in Arts end.
- Apr. 26 Monday . . . . . Meeting of the College Committee of Trinity College.
- Apr. 28 Wednesday . . . Meeting of the Faculty of Arts of Victoria College.
- Apr. 30 Friday . . . . . Meeting of University College Council.
- Apr. 30 Friday . . . . . Meeting of the Senate of Victoria College.
- May 1 Saturday . . . . . Annual Examinations in Arts, Law, Pharmacy, Music and Agriculture begin.
- May 1 Saturday . . . . . Last day for receiving applications for the Alexander Mackenzie Fellowships in Political Science.
- May 1 Saturday . . . . . Last day for receiving applications for the June Examinations in Arts.
- May 5 Wednesday . . . Meeting of the Council of the Faculty of Education.
- May 6 Thursday . . . . . Meeting of the Land, Finance and Executive Committee of Trinity College.
- May 7 Friday . . . . . Meeting of the Council of the Faculty of Applied Science and Engineering.
- May 10 Monday . . . . . Annual Examinations in Medicine begin.
- May 10 Monday . . . . . Meeting of the Council of the Faculty of Arts.
- May 15 Saturday . . . . . Last day for receiving applications from candidates for Junior Matriculation Scholarships.
- May 24 Monday . . . . . University Buildings closed.
- May 29 Saturday . . . . . Session ends in the Faculty of Medicine.
- May 31 Monday . . . . . Meeting of the College Committee of Trinity College.
- June 1 Tuesday . . . . . Last day for receiving applications for Fellowships.
- June 2 Wednesday . . . Meeting of the Faculty of Arts of Victoria College.
- June 9 Wednesday . . . Term Meeting of Senate.
- June 9 Wednesday . . . Senior Matriculation Examination begins.
- June 9 Wednesday . . . Junior and Senior Matriculation Examinations at centres outside the Province of Ontario begin.
- June 10 Thursday . . . . . Meeting of the Land, Finance and Executive Committee of Trinity College.
- June 11 Friday . . . . . University Commencement.



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## 1914-1915

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## CONSTITUTION AND ADMINISTRATION OF THE UNIVERSITY.

The constitution, powers and functions of the University are defined in "The University Act, 1906." (R.S.O., 1914, Chap. 279.)

The management of the property, finances and academic business of the University is entrusted to the Board of Governors, the Senate, Convocation, the Faculty Councils, the Council of University College and the Caput. The functions of these various bodies are exercised subject to supervision and control by the Crown, as hereafter explained.

1. **THE CROWN.**—The Lieutenant-Governor-in-Council has the power to appoint and to remove the Board of Governors (with the exception of the Chancellor and the President); to appoint and remove the Chairman of the Board; his assent is necessary before the Board can make any expenditure which impairs the endowment of the University or College; through the Provincial Auditor or someone else appointed by himself, he audits the accounts of the Board and he requires of them an Annual Report for submission to the Legislature.

2. **THE BOARD OF GOVERNORS.**—The Board of Governors consists of: The Chancellor and the President, *ex-officio*, and eighteen persons appointed by the Lieutenant-Governor-in-Council, one of whom is named as Chairman of the Board. The appointed members hold office for six years, and one-third of the number retires every two years, but these members are eligible for re-election. The Board has power to appoint the President of the University; and to appoint or remove all of the officers and servants of the University or University College upon the nomination or recommendation of the President. The government, conduct, management and control of the University and University College and of the property, revenues, business and affairs thereof are vested in the Board (University Act, 1906, Section 37), but all expenditures of endowment must be authorised by the Lieutenant-Governor-in-Council. The Board makes by-laws, rules and regulations regarding the investment of the funds; the selling and leasing of University properties; the letting of contracts; the appointment and removal of the Bursar and his assistants, clerks and other officers and servants of the University; the rate of salaries to be paid to the staff and officers; the fees to be paid by students; the annual appropriations and the transaction of other business.

3. **THE SENATE.**—The Senate consists of four classes of members: (1) *Ex-officio* members; (2) Faculty members; (3) Appointed members; and (4) Elected members. The *ex-officio* members are the Chancellor, the Chairman of the Board of Governors, the President of the University, the Principal of University College, the President or other head of each federated university or college, the Deans of the Faculties of Arts, Medicine, Applied Science and Engineering, Household Science, Education and

Forestry, all past Chancellors, Vice-Chancellors and Presidents. Representation of the Faculties is made up as follows; The professors, not including the associate professors, of the Faculty of Arts of the University; five members of the Faculty of Medicine; five members of the Faculty of Applied Science and Engineering; two members of the Faculty of Education; three members from each of the four Arts Colleges, University College, Victoria University, Trinity College and St. Michael's College. The appointed members consist of one representative appointed by each federated university, two by each federated college, one by the Law Society of Upper Canada and one by each federated institution, subject, however, in the latter case, to certain restrictions. The elected members number thirty-six, made up of twelve members representing the graduates in Arts who at graduation were enrolled in University College; five members each representing similar graduates in Victoria College and Trinity College; four representing the graduates in Medicine; two each representing the graduates in Applied Science and Engineering and in Agriculture; two representing the graduates in Law; and four representing the principals of collegiate institutes or high schools or assistants therein who are actually engaged in teaching in such institute or school. The graduates in Medicine and Law of Victoria University and Trinity College vote with the graduates of the University of Toronto in these same faculties.

The body thus composed is renewed once in four years, when all except the ex-officio members and the representatives of the Faculty of Arts of the University must retire, but are eligible for reappointment or re-election. The Chairman of the Senate is the President.

The Senate has the power to fill any vacancy which may occur among the elected members of the Senate and to return a final decision in any dispute which may arise in connection with the Senate elections. Among the powers and duties of the Senate are the following: To provide for the regulation and conduct of its proceedings; for the granting of degrees, including honorary degrees, and certificates of proficiency, except in Theology; for the establishment of exhibitions, scholarships and prizes; for the affiliation of any college established in Canada; for the dissolution or modification of the terms of affiliations; for the cancellation, recall and suspension of degrees; for the establishment of any faculty, department, chair or course of instruction in the University, or any department, chair or course of instruction in University College, except Theology; for the conduct of the election of members of the Senate; for the appointment of examiners and the conduct of all University examinations other than those in the faculties; for the representation on the Senate of any faculty which may hereafter be established; for the preparation and publication of the calendars; to consider and determine on the report of the faculties, the courses of study in these faculties; and all other courses of study for which no faculty is created; to consider and determine on the report of the various faculty councils, the appointment of examiners and the conduct and results of the examinations in these faculties; to consider such matters as may be

reported to it by the council of any faculty and to communicate its opinion or action thereon to the council; to hear and determine appeals from decisions of the faculty councils upon applications and memorials by students and others; to make rules and regulations for the management and conduct of the Library and to prescribe the duties of the Librarian; to make such changes in its own composition as may be deemed expedient; and to make such recommendations to the Board as may be deemed proper for promoting the interests of the University and of University College or for carrying out the objects and provisions of the Act.

4. CONVOCATION.—Convocation consists of the whole body of graduates of the University, in all faculties. Except indirectly through its elected representatives, no part of the management of the University is exercised by it as a whole. It elects the Chancellor, and, in divisions according to faculty, it elects members of Senate, as its representatives in Arts, Medicine, Law, Applied Science and Engineering and Agriculture. Any question relating to University affairs may be discussed by it, and a vote taken. The result of such discussion is communicated to the Senate, which must consider the representation made, and return to Convocation its conclusion thereon.

5. FACULTY COUNCILS.—The six faculties of Arts, Medicine, Applied Science and Engineering, Household Science, Education and Forestry have each a Council, the President being Chairman, ex-officio, of the first and the Deans of the respective faculties of the other five. All professors and associate professors engaged in teaching students of any faculty have a seat and vote upon the council of the faculty whose students they teach; lecturers also, provided they are upon the permanent staff, have a seat but no vote in the council. Each council is autonomous, and has the settlement in the first instance of all applications and memorials from its students, the drawing up of a curriculum of studies, and the appointment of examiners and conduct of examinations. In the case of applications and memorials the settlement by the council is subject to an appeal to the Senate; in the case of courses of studies, appointment of examiners and conduct of examinations, the decisions of the councils are subject to the approval of and confirmation by the Senate.

The Council of the Faculty of Arts includes the Principal of University College, the President or other head of every federated university, the Dean of the Faculty of Arts, the teaching staff of University, Victoria, Trinity and St. Michael's College (except in the case of those whose appointments are temporary), and one professor in the Department of Religious Knowledge appointed by each federated university or college.

6. THE CAPUT.—The Caput is a committee composed of the President, the Principal of University College, the Heads of the federated universities, the Heads of the federated colleges, and the Deans of the faculties of the University.

It has power to authorize teaching and lectures by others than the duly appointed members of the teaching staff, to exercise discipline over



students, where more than one college or one faculty is concerned, or where breaches of discipline occur outside the buildings or grounds appropriated to the several colleges and faculties.

7. THE COUNCIL OF UNIVERSITY COLLEGE.—This body is composed of the Principal and the Professors and Associate Professors of the College. It has committed to it the direction and management of the College with full authority over and entire responsibility for the discipline (including the imposition of reasonable fines) of the undergraduates in relation to the lectures and other instruction of the professors, lecturers and other teachers of the College; and no lecturing or teaching of any kind may be carried on in the College by any other than the duly appointed professors or teachers without the authority of the Council.

8. FEDERATED INSTITUTIONS.—The following institutions are federated with the University, viz., Victoria College, Trinity College, St. Michael's College, Knox College and Wycliffe College. The president or other head of each is, ex-officio, a member of the Senate and of the University Council. In addition, Knox and Wycliffe Colleges each appoint two other representatives on the Senate. Victoria and Trinity Colleges each appoint one member and the graduates of each elect five more representatives to represent each College. All regular students matriculated in the University who are enrolled in University College or Victoria College or Trinity College or St. Michael's College and who enter their names with the Registrar of the University are entitled to free instruction in Arts in the University. But this provision does not include exemption from laboratory fees, nor does it apply to post graduate instruction. When a federated college, by arrangement with the University Council, teaches any part of the Arts course the Board of Governors may make a reduction in the fees of students taught in such College.

9. REVENUES OF THE UNIVERSITY.—In addition to the remains of the original endowment and additions made to it from time to time (under which heads this University is possessed of an annual income of about sixty thousand dollars) the Legislature has made provision for payment to the University, annually, of a sum equal to fifty per cent. of the average of the gross receipts of the province from succession duties, determined by and based upon the gross receipts from such duties of the three preceding years.



## MATRICULATION.

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### GENERAL REGULATIONS.

The subjects of Junior Matriculation are as follows:—Latin, English, History, Mathematics, and any two of the following: Greek, German, French, Experimental Science.

Pass and honour papers will be set in each of these subjects.

In certain cases foreign students may present themselves for Examination in their native language instead of Greek or German or French, when the language and the curriculum in that language have been approved by the Senate. The Examination in an approved language consists of two papers, similar in character to those in English.

The pass papers are as follows:—

Latin Authors, Latin Composition, English Literature, English Composition, British and Canadian History, Greek and Roman History, Algebra, Geometry, Greek Authors, Greek Composition, German Authors, German Composition, French Authors, French Composition, Experimental Science—Physics, Experimental Science—Chemistry.

### STANDARDS.

The pass standard is forty per cent. of the marks assigned to a paper with an average of sixty per cent. with such modification or exceptions as may be deemed proper in consideration of the total number of marks and the confidential reports of the Principals.

A candidate who has obtained the average of sixty per cent. on all the papers but has failed to obtain forty per cent. in at most three of these papers may complete Junior Matriculation by obtaining forty per cent. on each of these papers at any one subsequent examination.

A candidate who has obtained forty per cent. on each of at least eight papers, with an average of sixty per cent. on the same, will be credited with these papers. In order to complete his Matriculation, he must obtain at one subsequent examination, forty per cent. on each of the remaining papers, with an average of sixty per cent.

The first class honour standard is seventy-five per cent., the second class sixty per cent., and the third class fifty per cent. of the marks assigned to the subject with not less than forty per cent. on each of the papers in a subject.

A candidate for honours and scholarships in the Faculty of Arts will be examined only on the honour papers in a subject, but a candidate who fails to obtain honours may receive pass standing in the subject.

A candidate who has passed Junior Matriculation may present himself at a subsequent examination for Junior Matriculation Scholarships. A person to whom a scholarship has been awarded may not compete a second time.

### FACULTY OF ARTS.

A candidate who has passed the Junior Matriculation and proposes to enter the Faculty of Arts, must produce satisfactory certificates of good character and of having completed the sixteenth year of his age on or before the first of October of the year in which he registers.

The subjects for Matriculation in Arts are: Latin, English, History, Mathematics, and any two of the following: Greek, German, French, Experimental Science.

A candidate preparing to enter an undergraduate Special Course should select his options so as to meet the requirements of that course as found in the following paragraphs:

A candidate for Pass Junior Matriculation may enter the General Course but not a Special Course in the First Year.

The requirements for entrance upon the Special Courses of the First Year are as follows:—

A student who proposes to enter the Special Course in Classics is required to obtain at Matriculation or at an equivalent examination, Honour standing in Greek, Latin and at least one of: English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry.

A student who proposes to enter the Special Course in Greek and Hebrew is required to obtain at Matriculation or at an equivalent examination Honour standing in Greek and at least two of: Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry.

A student who proposes to enter the Special Course in Modern Languages is required to obtain at Matriculation or at an equivalent examination Honour standing in German, French, and at least one of: Greek, Latin, English, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry.

A student who proposes to enter the Special Course in English and History (Class.) is required to obtain at Matriculation or at an equivalent examination Honour standing in Greek, Latin, English, and at least one of: German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry.

A student who proposes to enter the Special Course in English and History (Mods.) is required to obtain at Matriculation or at an equivalent examination Honour standing in Latin, German, French, and one of English, Algebra and Geometry, Trigonometry, Biology, Physics, Chemistry.

A student who proposes to enter the Special Course in Modern History is required to obtain at Matriculation or at an equivalent examination Honour standing in three of: Greek, Latin, English, German, French, Mathematics.

A student who proposes to enter the Special Course in Political Science is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which one must be a foreign language.

A student who proposes to enter the Special Course in Commerce and Finance is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which one must be a foreign language.

A student who proposes to enter the Special Course in Mathematics and Physics is required to obtain at Matriculation or at an equivalent examination Honour standing in Mathematics and at least one of: Greek, Latin, English, German, French, Physics, Biology, Chemistry.

A student who proposes to enter the Special Course in Physics is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation and to select French as one of the three subjects in which Honour standing is required for entrance upon this course.

A student who proposes to enter the Special Course in Biology is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation and to select French as one of the three subjects in which Honour standing is required for entrance upon this course.

A student who proposes to enter the Special Course in Biological and Physical Sciences is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English,

German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation and to select French as one of the three subjects in which Honour standing is required for entrance upon this course.

A student who proposes to enter the Special Course in Physiological and Biochemical Sciences is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation and to select French as one of the three subjects in which Honour standing is required for entrance upon this course.

A student who proposes to enter the Special Course in Chemistry and Mineralogy is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation and to select French as one of the three subjects in which Honour standing is required for entrance upon this course.

A student who proposes to enter the Special Course in Geology and Mineralogy is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation and to select French as one of the three subjects in which Honour standing is required for entrance upon this course.

A student who proposes to enter the Special Course in Household Science is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation and to select French as one of the three subjects in which Honour standing is required for entrance upon this course.

#### **FACULTY OF MEDICINE.**

A candidate who has passed the Junior Matriculation and proposes to enter the Faculty of Medicine, must produce satisfactory certificates of good character and of having completed the sixteenth year of his age on or before the first of October of the year in which he registers.



The subjects for Matriculation in Medicine are: Latin, English, History, Mathematics, and any two of the following: Greek, German, French, Experimental Science.

### **FACULTY OF APPLIED SCIENCE AND ENGINEERING.**

A candidate who has passed the Matriculation Examination for the Faculty of Applied Science and Engineering must produce satisfactory certificates of good character and of having completed the seventeenth year of his age on or before the first of October of the year in which he registers.

The subjects for Matriculation in Applied Science and Engineering are: English, History, any three of: Greek, Latin, French, German, Experimental Science, together with forty per cent. in Honour Mathematics.

Candidates for Matriculation in this Faculty are advised to take the complete Junior Matriculation Examination in one year, and in a subsequent year, Honour Mathematics and Honour English.

In selecting the options it is recommended that students take French, German and Experimental Science. In the Department of Architecture French is required, in the Departments of Applied Chemistry and Chemical Engineering German is required, and in the Department of Mechanical Engineering it is desirable that students take German.

### **FACULTY OF FORESTRY.**

A candidate who has passed the Matriculation Examination and proposes to enter the Faculty of Forestry must produce satisfactory certificates of good character and of having completed the sixteenth year of his age on or before the first of October of the year in which he registers.

The subjects for Matriculation in Forestry are: English, History, Mathematics, German, and two of: Greek, Latin, French, Experimental Science.

### **DEPARTMENT OF MUSIC.**

The subjects for Matriculation in Music are: English, and two of: Greek, Latin, German, French.

A candidate for the degree of Bachelor of Music must complete his Matriculation prior to admission to the examination of the final year.

The pass standard is the same as that for pass Junior Matriculation.

A candidate who has obtained the average of sixty per cent. on all the six papers but has failed to obtain forty per cent. in at most two of these papers may complete Junior Matriculation by obtaining forty per cent. on each of these papers at any one subsequent examination.



A candidate who has obtained forty per cent. on each of at least four papers, with an average of sixty per cent. on the same, will be credited with these papers. In order to complete his Matriculation, he must obtain at one subsequent examination, forty per cent. on each of the remaining papers, with an average of sixty per cent.

### EXAMINATIONS.

The examination for pass and honour Junior Matriculation is held annually in June at centres in Ontario, and, if application is made to the Senate, the examination may, with the co-operation of the Department of Education, be held at centres outside Ontario.

Applications accompanied by the prescribed fee must be sent not later than the 15th of May, to the local Public School Inspector, or in the case of candidates intending to write at the University, to the Registrar.

Scholarship candidates must also send a special application by the same date to the Registrar according to a form to be obtained from him. The application must be accompanied by the fee when the candidate intends to write at the University; when he proposes to write at some other centre, the ordinary application and the fee must be sent to the local Public School Inspector.

A Junior Matriculation examination will be held in June at such centres outside Ontario as may from time to time be authorized by the Senate. Applications for the establishment of such local centres must be made to the Registrar not later than the 15th of April in each year. Applications from candidates for this examination must be sent to the Registrar not later than the 1st of May.

The presiding examiner's fee of \$5.00 per diem, together with any other necessary expenses in connection with a local examination, must be met by the candidates at the centre, or by the authorities of the School or College on whose application it is held.

### SPECIAL MATRICULATION CONDITIONS.

A candidate who is actually engaged in a mercantile, industrial, or other occupation may proceed to pass Junior Matriculation under the following conditions:—

(a) He may present himself for one or more subjects at any June or September Examination.

(b) At any such Examination he will receive credit for a subject or subjects on obtaining forty per cent. in each paper and an aggregate of sixty per cent. of the total marks assigned to such subject or subjects. There are two papers given in each subject.'

(c) Matriculation must be completed under these conditions within four consecutive years.

In order to secure credit for the subject or subjects written, a candidate who desires to matriculate under these regulations must, immediately on receipt of the statement of his marks, return the same to the Secretary of the University Matriculation Board, Parliament Buildings, accompanied by a certificate from his employer to the following effect:—

.....191..  
 I,.....do hereby certify that.....  
 was in my employ from.....to.....in the  
 capacity of.....and that this employment made it  
 impossible for him to attend the regular day sessions of a secondary school.  
 My business is that of.....  
 located at.....

Give business address in full

.....  
 Signature in full

To the Secretary of University Matriculation Board.

A candidate for matriculation in Applied Science and Engineering under these regulations may divide the examination in Honour Mathematics, in which case he will receive credit for any of the papers, viz.: Algebra, Geometry, Trigonometry—in which he receives at least forty per cent. of the marks assigned to the paper.

Candidates for Matriculation in Music under these regulations must complete the work within two years.

Exceptional cases, for which provision is not made under these regulations, may be determined as they arise by the University Matriculation Boards.

### **SUPPLEMENTAL MATRICULATION EXAMINATION.**

1. The Supplemental Pass Junior Matriculation examination is conducted by the Department of Education for the University Matriculation Board at the following centres:—

(a) The University of Toronto; Queen's University, Kingston; McMaster University, Toronto; Western University, London.

(b) Any of the following, upon request:—Windsor, Chatham, Sarnia, St. Thomas, Woodstock, Brantford, Simcoe, Cayuga, Welland, St. Catharines, Hamilton, Goderich, Stratford, Berlin, Guelph, Walkerton, Owen Sound, Orangeville, Barrie, Whitby, Bowmanville, Cobourg, Lindsay, Peterborough, Belleville, Picton, Napanee, Brockville, Kemptville, Prescott, Morrisburg, Cornwall, Alexandria, Vankleek Hill, Ottawa, Smith's Falls, Renfrew, Bracebridge, North Bay, Sault Ste. Marie, Port Arthur, Haileybury.

(c) Elsewhere in Ontario upon request, and if approved by the University Matriculation Board.

(d) Elsewhere in Canada, upon request of one of the aforesaid Universities and approval of the Board.

2. Applications to write on the examination, accompanied by the necessary fee, shall be received at the Department of Education as follows:—

(a) Up to September 1st, from those who wish to write at any centre authorized in Ontario.

(b) Up to August 25th, from those who wish to write elsewhere in Ontario.

(c) Up to August 1st, from those who, through one of the aforesaid Universities, make application to write outside of the Province of Ontario.

3. On payment of the required fee with one dollar additional, a candidate who has failed to make application as specified in the foregoing regulation (2) may be admitted to the examination at a centre already established, provided the accommodation is adequate and the number of question papers sufficient.

4. The subjects of the examination, the prescription of work and the standard required shall be the same as for the Midsummer Pass Junior Matriculation examination of the same year.

5. The following are eligible to become candidates at this examination:

(a) Those who are applicants for the complete Matriculation examination.

(b) Those who are completing the Matriculation examination under the regulations in force in any previous year.

(c) Those who are applicants for Matriculation standing in certain papers.

6. (a) Candidates may write at any one of the four University centres mentioned in 1 (a) without any additional cost to themselves.

(b) Candidates who write at any other centre, in addition to paying the fee required in (7), must also defray the local expenses of conducting the examination. These include the cost of supplies, any charge for the examination room, express charges, and the allowance to the Presiding Officer at \$5 per day.

7. The fee for writing on the Supplemental Examination shall be \$2.00 for each paper, with a maximum fee of \$10.00.

8. Forms of application and copies of the time-table may be obtained after July 1st, on application to the Secretary, University Matriculation Board, Toronto.

**EQUIVALENT EXAMINATIONS.**

A person who has passed the Matriculation examination of another University may be admitted *ad eundem statum* on such conditions as the Senate, on application, may prescribe.

The local examinations conducted by the University of Oxford and the University of Cambridge are accepted *pro tanto*.

Certificates of having passed the subjects common to the Matriculation and other examination of any of the following examinations will be accepted *pro tanto*, provided always that the standards of these certificate as to subjects and percentages meet the requirements of this University.

**Province of Ontario.**

The examinations for entrance to Normal Schools or for entrance to Faculties of Education or examinations of the same standard under other names.

Candidates who have already passed Part I. of the pass Junior Matriculation, or of the Junior Leaving examination, will not be required to pass again in the subjects thereof.

**Province of Quebec.**

The Associate in Arts examination.

**Province of New Brunswick.**

The examination for Superior and Grammar School Licenses.

**Province of Nova Scotia.**

The Junior and Senior Leaving examinations (Grades XI. and XII.).

**Province of Manitoba.**

The Second Class Teachers' examination.

**Province of British Columbia.**

The Intermediate and Senior Grade examination.

**Province of Prince Edward Island.**

The First Class Teachers' License examination.

**Province of Alberta.**

The Standard VII. and VIII. examinations.

**Province of Saskatchewan.**

The First and Second Class Teachers' examinations.

The Senior and Junior Matriculation examinations.

### Newfoundland.

#### Intermediate and Associate Grade examinations.

Candidates whose certificates do not cover all the subjects may complete matriculation by passing in the remaining subjects as prescribed by the University, or by passing in the subjects of similar standard as prescribed by the Education Department of the Province by which the certificate was issued.

The Senate will consider applications for the recognition of certificates other than those mentioned, as occasion may require.

### FEES.

The Fees payable are as follows:—

For registration of certificates for other than University purposes.....	\$5.00
For registration of certificates other than those of Ontario, which exempt the applicant from the full Matriculation examination.....	5.00
For admission <i>ad eundem statum</i> .....	5.00

### SCHOLARSHIPS.

Where there is no letter prefixed, the scholarship is open to all competitors and is tenable in any one of the colleges. In all other cases, the letter U. indicates University College; the letter V., Victoria College; and the letter T., Trinity College. The student to whom one of these scholarships is awarded is required to enrol in each year of his course in the College to which the scholarship belongs.

#### General Proficiency.

- (1) The Prince of Wales Scholarship, the gift of King Edward VII., of the value of \$50, and the First Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$60, with free tuition for four years, of a total value of \$270.
- T. (2) The Upper Canada College-Trinity Scholarship, the gift of Upper Canada College Old Boys, who are alumni of Trinity College, of the value of \$100, with free tuition for four years, of a total value of \$260.  
The successful candidate must obtain first class honours in at least one department. Pass papers rank at half the value of Honour papers. The sum of \$60 will be paid in equal terminal instalments in the first year, and \$40 in the second year.
- U. (3) The Gibson Scholarship, the gift of the Hon. J. M. Gibson, of the value of \$100, with free tuition for three years, of a total value of \$220.



- T. (4) The F. A. Bethune Scholarship, the gift of the trustees of the F. A. Bethune Memorial Fund, of the value of \$60, with free tuition for four years, of a total value of \$220.

This Scholarship is open for competition to boys who have passed through the Sixth Form of Trinity College School. The conditions are the same as for 2, except that the money will all be paid in the first year in equal terminal instalments.

- (5) The Second Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$55, with free tuition for four years, of a total value of \$215.
- (6) The Third Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$50, with free tuition for four years, of a total value of \$210.
- (7) The Fourth Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$45, with free tuition for four years, of a total value of \$205.
- (8) The Fifth Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$40, with free tuition for three years, of a total value of \$160.
- (9) The Sixth Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$35, with free tuition for three years, of a total value of \$155.
- (10) The Seventh Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$30, with free tuition for three years, of a total value of \$150.
- (11) The West Durham Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$25.

This scholarship is preferentially tenable by a scholar from the Bowmanville High School.

Candidates for these scholarships are required to obtain first class honours in at least one department.

### **Proficiency in Two Departments.**

#### **CLASSICS AND MODERN LANGUAGES.**

The First Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$60, with free tuition for four years, of a total value of \$220.

The Second Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$55, with free tuition for four years, of a total value of \$215.

The Third Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$40, with free tuition for three years, of a total value of \$160.

The Fourth Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$35, with free tuition for three years, of a total value of \$155.

#### CLASSICS AND MATHEMATICS.

The First Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$60, with free tuition for four years, of a total value of \$220.

The Second Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$40, with free tuition for three years, of a total value of \$160.

#### MODERN LANGUAGES AND MATHEMATICS.

The First Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$60, with free tuition for four years, of a total value of \$220.

The Second Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$40, with free tuition for three years, of a total value of \$160.

#### MODERN LANGUAGES AND SCIENCE.

The First Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$60, with free tuition for four years, of a total value of \$220.

The Second Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$40, with free tuition for three years, of a total value of \$160.

#### MATHEMATICS AND SCIENCE.

The First Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$60, with free tuition for four years, of a total value of \$220.

The Second Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$40, with free tuition for three years, of a total value of \$160.

#### ENGLISH, HISTORY AND GEOGRAPHY.

**T.** The Burnside Scholarship, founded in memory of the late Dr. Burnside, of the value of \$40, with free tuition for four years, of a total value of \$200.

Candidates for these scholarships must obtain first class honours in one of the specified departments and at least second class in the other.

**Proficiency in One Department.**

## CLASSICS.

- V. The Martha Bell Scholarship, the gift of Professor A. J. Bell, of the value of \$100, with free tuition for four years, of a total value of \$260.
- T. The Wellington Scholarship, founded by the first Duke of Wellington, of the value of \$80, with free tuition for four years, of a total value of \$240.
- U. The McCaul Scholarship, the gift of G. A. H. Fraser, M.A., formerly Fellow in Classics 1889-91, Andrew Melville Stewart, M.A., LL.B., Honour graduate in Classics, 1891, and Principal Hutton, of the value of \$75, with free tuition for four years, of a total value of \$235.
- T. The Bishop Strachan Scholarship, founded in memory of the first Bishop of Toronto, of the value of \$40, with free tuition for four years, of a total value of \$200.

The First Mary Mulock Scholarship, the gift of the late Mrs. Mulock, of the value of \$60, with free tuition for three years, of a total value of \$180.

- V. The Flavelle Scholarship, the gift of J. W. Flavelle, LL.D., of the value of \$60, with free tuition for three years, of a total value of \$180.

The Second Mary Mulock Scholarship, the gift of the late Mrs. Mulock, of the value of \$60, with free tuition for two years, of a total value of \$140.

- V. The W. E. H. Massey Scholarship, the gift of the late W. E. H. Massey, Esq., of the value of \$50, with free tuition for two years, of a total value of \$130.

## MODERN LANGUAGES.

- T. The Dickson Scholarship, the gift of the late William Dickson, Esq., of the value of \$40, with free tuition for four years, of a total value of \$200.

The First Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$60, with free tuition for three years, of a total value of \$180.

The Second Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$30, with free tuition for three years, of a total value of \$150.

## MATHEMATICS.

- T. The Wellington Scholarship, founded by the first Duke of Wellington, of the value of \$80, with free tuition for four years, of a total value of \$240.

- T. The Burnside Scholarship, founded in memory of the late Dr. Burnside, of the value of \$40, with free tuition for four years, of a total value of \$200.

The First Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$60, with free tuition for three years, of a total value of \$180.

The Second Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$30, with free tuition for three years, of a total value of \$150.

#### SCIENCE.

- T. The Dickson Scholarship, the gift of the late William Dickson, Esq., of the value of \$40, with free tuition for four years, of a total value of \$200.

The First Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$60, with free tuition for three years, of a total value of \$180.

The Second Edward Blake Scholarship, the gift of the Hon. Edward Blake, ex-Chancellor of the University, of the value of \$30, with free tuition for three years, of a total value of \$150.

Candidates for these scholarships must obtain first class honours in their departments.

#### MODERN HISTORY.

The Riddell Scholarship, the gift of the Hon. Mr. Justice Riddell, of the value of \$200, with free tuition for two years, of a total value of \$280.

The Matthews Scholarship, the gift of Wilmot D. Matthews, Esq., of the value of \$100, with free tuition for two years, of a total value of \$180.

These scholarships are tenable for one year, and will be awarded in September 1915, 1916, and 1917 on the results of (a) a paper on the History of Canada and Great Britain since 1763; (b) a paper on General Knowledge; (c) an English Essay; and (d) an Oral Examination.

A candidate for either of these scholarships must have secured at Matriculation, Honours in at least three of Greek, Latin, English, German, French, Mathematics.

A candidate to whom either of these scholarships is awarded will be required to enter the course in Modern History for the First Year.

The first examination will be held in the Main Building of the University on September 25th and 27th, 1915. For further particulars application should be made to the Registrar of the University.



### **The Leonard McLaughlin Scholarship.**

- T. This scholarship has been endowed by Mr. and Mrs. Michael McLaughlin, of Toronto, in memory of their only son Leonard, who was at the time of his death, December 10th, 1899, an undergraduate of Trinity College. As he was a pupil at Upper Canada College from 1890 to 1896, only pupils of that school are eligible for the scholarship. This award will be made by a board consisting of the Provost of Trinity College with the Principal and the Classical Master of Upper Canada College to such candidate as, without written examinations, shows evidence of possessing good scholarship in Classics, as well as manliness, a sense of honour, and a strong moral character. Failing a suitable candidate in Classics, the Board may at its discretion select one in Modern Languages, though it is not under any obligation to make a selection in any given year.

Successful candidates must pursue a course of study in Classics or Modern Languages to the satisfaction of the Board. In case of necessity, to be by it determined, the Board may allow a postponement of the time of beginning the course or an interruption of the same.

The scholarship is worth \$200; \$100 will be paid to successive holders at the end of the Michaelmas Term in the First Year, and \$100 at the end of the Michaelmas Term in the Second Year.

### **The Cooper Exhibition.**

- T. These two exhibitions, founded by the Rev. C. W. Cooper, of the value of \$100 each, are open to any matriculated student of Trinity College not holding a scholarship, with a preference to the sons of clergymen. The exhibitioners are nominated by the Most Reverend the Lord Bishop of Toronto.

### **The Mackenzie Bursaries.**

- T. Sir William Mackenzie, of Toronto, offers ten Bursaries of \$100 each, to be given to resident students in Arts enrolling in Trinity College. A preference will be given to Presbyterians.

### **Corporation Bursaries.**

- T. The Corporation has also provided that five Bursaries of a value of \$50 per annum be open every year for a period not exceeding three years. Any student who shall have passed the Matriculation examination, and shall have satisfied the Executive Committee that he cannot without the aid thus afforded, avail himself of the advantage of a University education, will be eligible for a bursary, provided that he is not the holder of a scholarship or exhibition. *Caeteris paribus* the sons of clergymen will be preferred.

Scholarships, exhibitions and bursaries will be forfeited if the holder fails to keep a term, or to pass any examination at the regular time.



# REGULATIONS REGARDING THE UNIVERSITY SCHOLARSHIPS.

The marks for all classes of scholarships will be assigned in the following proportions:

CLASSICS.....	{ Latin.....	600	1200
	{ Greek.....	600	
MATHEMATICS.....			1200
MODERN LANGUAGES...	{ English.....	400	1200
	{ French.....	400	
	{ German.....	400	
SCIENCE.....	{ Chemistry.....	400	1200
	{ Physics.....	400	
	{ Biology (Botany, Zoology).....	400	
HISTORY.....			200

Candidates for scholarships shall at the same examination pass in all the subjects necessary for Junior Matriculation.

A candidate to whom a scholarship has been awarded at a Junior Matriculation examination may not compete for a scholarship at a subsequent Matriculation examination.

With the exception of the Prince of Wales Scholarship, no one shall be entitled to hold more than one University scholarship; but any one who, but for this provision, would have been entitled to a second scholarship will be published in the lists.

College Scholarships may be held with University Scholarships.

Every candidate for a Junior Matriculation scholarship shall, on application for examination, sign a declaration to the effect that he intends to proceed to a degree in Arts in this University.

A candidate competing for University scholarships must indicate at the time of application for examination the College in which he intends to register.

No scholarship will be awarded save on condition that the candidate becomes a matriculated student in actual attendance in this University, through enrolment in one of the colleges.

Free tuition awarded will be available on the following conditions:—For the First Year on the award of the scholarship; for any year after the first on proof that the claimant has passed his examination for the preceding year with a first class in an honour course.

In case in any year any scholarship be not taken, it will be allowable to award such scholarship, or some part thereof, to a candidate who has shown special excellence in the examination in some other group and has taken scholarship rank therein, but has failed to win a scholarship therein.

These regulations are subject to change by the Senate.

### **REGULATIONS RESPECTING UNIVERSITY COLLEGE AND VICTORIA COLLEGE SCHOLARSHIPS.**

Scholarships in University College and in Victoria College are tenable with an Edward Blake Scholarship, always providing that the winner be in first class honours in Classics at Matriculation and becomes and continues to be a registered student in attendance upon lectures either in Classics or in English and History with the Classical option in the College by which the scholarship is awarded. In the event of no eligible candidate being forthcoming at Matriculation for either of these scholarships, the scholarships will be held over until the year following, when two scholarships will be offered.

### **REGULATIONS RESPECTING TRINITY COLLEGE SCHOLARSHIPS.**

The holders of scholarships are ordinarily required to reside in College, but when they reside with their parents or guardians by permission of the Provost, they will be allowed free tuition when such is the whole or part of the emolument of their scholarships. The condition as to the residence is absolute in the case of the Upper Canada College-Trinity, the F. A. Bethune and the Leonard McLaughlin Scholarships.

In order to hold their scholarships in the succeeding years, candidates must retain the positions in their departments which they obtained at Junior Matriculation.

## JUNIOR MATRICULATION.

### FOR PASS.

#### Greek.

Translation into English of passages from the prescribed texts, with questions thereon.

Translation at sight of simple narrative passages similar to the Xenophon prescribed.

Questions on Greek accidence and on the common rules of Greek syntax to test the candidate's accuracy and comprehension in such matters as are needful for the intelligent reading of his texts.

The following are the prescribed texts:—

1915 and 1917: Xenophon, Philpotts and Jerram, *Easy Selections from Xenophon*, chaps. 3, 4, 5; Homer, *Iliad*, I., 1-350.

1916: Xenophon, Philpotts and Jerram, *Easy Selections from Xenophon*, chaps. 3, 4, 5; Homer, *Iliad*, VI., 66-118 and 237 to the end.

Two papers will be set: (1) Prescribed texts; (2) translation at sight, accidence and syntax.

#### Latin.

Translation at sight of passages of average difficulty from Cæsar, upon which special stress will be laid.

Translation, with questions, from a prescribed portion of Virgil's *Æneid*.

The marks assigned for the translation from prescribed authors shall not be more than twenty-five per cent. of the total marks assigned to the Latin papers.

Questions on Latin accidence.

Translation into Latin of English sentences involving a knowledge of the following principles of Latin syntax: The common uses of the cases; the accusative with the infinitive; the subjunctive in simple sentences; final and result clauses; the law of the sequence of tenses; the indirect question; verbs of fearing, doubting and hindering; the use of the participle, gerund and gerundive, active and passive periphrastic; indirect discourse; and the common forms of the conditional sentence.

The vocabulary will be taken from the prescribed portion of Cæsar and special stress will be laid upon this part of the examination.

Examination upon a short prescribed portion of Cæsar, to test the candidate's knowledge of Latin syntax and his power of idiomatic translation.

The following are the texts prescribed:—

1915: Cæsar, Book IV., chaps. 20-38, and Book V., chaps. 1-23; Virgil, *Æneid*, Book I., vv. 1-510.

1916, 1917: Cæsar, *De Bello Gallico*, Book IV., chaps. 20-38, and Book V., chaps. 1-23; Virgil, *Æneid*, Book II., vv. 1-505.

Two papers will be set: (1) Translation at sight, Virgil, and *accidence*. (2) Translation into Latin, syntax and idiomatic translation from prescribed Cæsar, etc.

### English.

COMPOSITION: An essay on one of several themes set by the examiners. In order to pass in this subject, legible writing, correct spelling and punctuation, and idiomatic and grammatical construction of sentences are indispensable. The candidate should also give attention to the structure of the whole essay, the effective ordering of the thought, and the accurate employment of a good English vocabulary. About two pages of foolscap is suggested as the proper length for the essay; but quality, not quantity, will be mainly regarded.

One examination paper.

LITERATURE: Such questions only will be set as may serve to test the candidate's familiarity with, and intelligent and appreciative comprehension of, the prescribed texts. The candidate will be expected to have memorized the passages prescribed below. In addition to the questions on the prescribed selections, others will be set on a "sight passage" to test the candidate's ability to interpret literature for himself.

The candidate shall produce satisfactory proof, by the certificate of the principal of the school from which he comes or otherwise, that he has read carefully, during the preceding year, at least four suitable works in English literature (both prose and poetry) in addition to those prescribed below for examination.

One examination paper.

1915: Wordsworth, Michael, Influence of Natural Objects, Nutting, *Elegiac Stanzas*, To the Rev. Dr. Wordsworth, To the Cuckoo, "Bright flower, whose home," and the following eight sonnets: "It is not to be thought of," "Dark and more dark the shades of evening fell," "O friend I know not," "Milton, thou shouldst," "Surprised by joy—impatient as the wind," "Hail twilight, sovereign of our peaceful hour," "I thought of Thee, my partner and my guide," "Such age, how beautiful"; Tennyson, *The Epic and Morte d'Arthur*, *Ænone*, *The Brook*, and the following sections of "In Memoriam"; XXVII, LXIV, LXXXIII, LXXXVI, CI, CXIV, CXV, CXVIII, CXXIII; Shakespeare, *Merchant of Venice*.

Passages for memorization: Wordsworth: "To the Cuckoo"; "It is not to be thought of"; "O friend, I know not"; "Milton, thou shouldst"; "Hail twilight, sovereign of our peaceful hour"; "I thought of Thee, my partner and my guide".

Tennyson: "Morte d'Arthur, ll. 246-255; Ænone, ll. 1-15, ll. 144-150, The lyric stanzas in the "Brook"; "In Memoriam": LXIV, LXXXIII LXXXVI, CI, CXV, CXVIII.

Shakespeare—The Merchant of Venice:—

Act I, Sc. 1, ll. 79- 99. Let me play . . . their brothers fools.

Act II, Sc. 9, ll. 36- 49. Who chooseth me . . . to be new varnished.

Act IV, Sc. 1, ll. 184-205. The quality of mercy . . . the deeds of mercy.

Act V, Sc. 1, ll. 54- 65. How sweet the moonlight . . . cannot hear it.

Act V, Sc. 1, ll. 102-108. The crow doth sing . . . true proportion.

1916: Coleridge, The Ancient Mariner; Tennyson, Lotos Eaters, Ulysses, "Of old sat Freedom," Locksley Hall, Songs from The Princess, Ode on the Duke of Wellington, Charge of the Light Brigade, Enoch Arden; Shakespeare, Julius Cæsar.

1917: Tennyson, The Lady of Shalott, St. Agnes' Eve, "Come not when I am dead," "Break, break, break," In the Valley of Caunteretz, Elaine; Browning, "All service ranks the same with God," Cavalier Tunes, My Last Duchess, The Boy and the Angel, Home Thoughts from Abroad, Up at a Villa, Love among the Ruins, The Guardian Angel, Prospice; Shakespeare, Macbeth.

Passages for memorization: Tennyson, The Lady of Shalott, Part I, St. Agnes' Eve, "Break, break, break", In the Valley of Caunteretz. Browning, "All service ranks the same with God", Home Thoughts from Abroad, Prospice, Love Among the Ruins.

#### MACBETH.

Act I, Sc. 5, ll. 16-31. LADY M. Glamis thou art . . . crown'd withal.

Act I, Sc. 7, ll. 1-28. MACB. If it were done . . . on the other.

Act II, Sc. 1, ll. 33-64. MACB. Is this a dagger . . . to hell.

Act III, Sc. 2, ll. 4-26. LADY M. Nought's had . . . him further.

Act III, Sc. 2, ll. 45-56. MACB. Be innocent . . . go with me.

Act V, Sc. 3, ll. 22-28. MACB. I have lived . . . dare not.

Act V, Sc. 3, ll. 39-45. MACB. Cure her . . . the heart?

Act V, Sc. 5, ll. 16-28. SEY. The Queen . . . signifying nothing.



**German.**

The candidate's knowledge of German will be tested by: (1) simple questions on grammar; (2) the translation of simple passages from English into German; (3) translation at sight of easy passages from modern German; and (4) an examination on the following texts:—

The texts contained in the New High School German Reader.

1915: Wildenbruch, *Der Letzte*.

1916: Seidel, *Aus goldenen Tagen*, edited by W. Bernhardt.

1917: Baumbach, *Waldnovellen*.

Two papers will be set: (1) Prescribed texts and translation at sight; questions on grammar; (2) the translation of English into German.

**French.**

The candidate's knowledge of French will be tested by: (1) simple questions on grammar; (2) the translation of simple passages from English into French; (3) translation at sight of easy passages from modern French, and (4) an examination on the following texts:—

The texts contained in the New High School French Reader.

1915: Labiche, *La Poudre aux Yeux*.

1916: Daudet, *Le Petit Chose à l'Ecole* (Blackie's Longer French Texts).

1917: Labiche, *Le Voyage de Monsieur Perrichon*.

Two papers will be set: (1) Prescribed texts and translation at sight; questions on grammar; (2) the translation of English into French.

**History.**

**BRITISH HISTORY.**—Great Britain and Canada from 1763 to 1885. The geography relating to the history prescribed. One examination paper.

**ANCIENT HISTORY.**—General outlines of the History of Greece to the death of Alexander and of the history of Rome to the death of Augustus, with a brief outline of the art, literature, philosophy, and social life of the Greeks and Romans. The geography relating to the history prescribed. One examination paper.

**Mathematics.**

**ALGEBRA.**—Elementary rules; highest common measure; lowest common multiple; fractions; square root; simple equations of one, two and three unknown quantities; indices; surds, quadratics of one and two unknown quantities.

One examination paper.

**GEOMETRY.**—A.—CONSTRUCTIONS.

To construct a triangle with sides of given lengths.

To construct an angle equal to a given rectilineal angle.

To bisect a given angle.

To bisect a given straight line.

To draw a line perpendicular to a given line from a given point in it.

To draw a line perpendicular to a given line from a given point not in the line.

Locus of a point equidistant from two given lines.

Locus of a point equidistant from two given points.

To draw a line parallel to another, through a given point.

To divide a given line into any number of equal parts.

To describe a parallelogram equal to a given triangle, and having an angle equal to a given angle.

To describe a parallelogram equal to a given rectilineal figure, and having an angle equal to a given angle.

On a given straight line to describe a parallelogram equal to a given triangle, and having an angle equal to a given angle.

To find the centre of a given circle.

From a given point to draw a tangent to a given circle.

On a given straight line to construct a segment of a circle containing an angle equal to a given angle.

From a given circle to cut off a segment containing an angle equal to a given angle.

In a circle to inscribe a triangle equiangular to a given triangle.

To find locus of centres of circles touching two given lines.

To inscribe a circle in a given triangle.

To describe a circle touching three given straight lines.

To describe a circle about a given triangle.

About a given circle to describe a triangle equiangular to a given triangle.

To divide a given line similarly to another given divided line.

To find the fourth proportional to three given lines.

To describe a polygon similar to a given polygon, and with the corresponding sides in a given ratio.

To find the mean proportional between two given straight lines.

To construct a polygon similar to a given polygon, and such that their areas are in a given ratio.

To describe a polygon of a given shape and size.

## B.—THEOREMS.

The sum of the angles of any triangle is equal to two right angles.

The angles at the base of an isosceles triangle are equal, with converse.

If the three sides of one triangle be equal, respectively, to the three sides of another, the triangles are equal in all respects.

If two sides and the included angle of one triangle be equal to two sides and the included angle of another triangle, the triangles are equal in all respects.

If two angles and one side of a triangle be equal to two angles and the corresponding side of another, the triangles are equal in all respects.

If two sides and an angle opposite one of these sides be equal, respectively, in two triangles, the angles opposite the other pair of equal sides are either equal or supplemental.

The sum of the exterior angles of a polygon is four right angles.

The greater side of any triangle has the greater angle opposite it.

The greater angle of any triangle has the greater side opposite it.

If two sides of one triangle be equal respectively to two sides of another, that with the greater contained angle has the greater base, with converse.

If a transversal fall on two parallel lines, relations between angles formed, with converse.

Lines which join equal and parallel lines towards the same parts are themselves equal and parallel.

The opposite sides and angles of a parallelogram are equal and the diagonal bisects it.

Parallelograms on the same base, or on equal bases, and between the same parallels are equal.

Triangles on the same base, or on equal bases, and between the same parallels are equal.

Triangles equal in area, and on the same base, are between the same parallels.

If a parallelogram and a triangle be on the same base, and between the same parallels, the parallelogram is double the triangle.

Expressions for area of a parallelogram, and the area of a triangle.

The complements of parallelograms about the diagonal of any parallelogram are equal.

The square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on the sides.

If a straight line be divided into any two parts, the sum of the squares on the parts, together with twice the rectangle contained by the parts, is equal to the square on the whole line.

The square on a side of any triangle is equal to the sum of the squares on the two other sides + twice the rectangle contained by either of these sides and the projection of the other side on it.

If more than two equal straight lines can be drawn from the circumference of a circle to a point within it, that point is the centre.

The diameter is the greatest chord in a circle, and a chord nearer the centre is greater than one more remote. Also the greater chord is nearer the centre than the less.

The angle at the centre of a circle is double the angle at the circumference on the same arc.

The angles in the same segment of a circle are equal, with converse.

The opposite angles of a quadrilateral inscribed in a circle are together equal to two right angles, with converse.

The angle in a semicircle is a right angle; in a segment greater than a semicircle less than a right angle; in a segment less than a semicircle greater than a right angle.

A tangent is perpendicular to the radius to the point of contact; only one tangent can be drawn at a given point; the perpendicular to the tangent at the point of contact passes through the centre; the perpendicular from centre on tangent passes through the point of contact.

If two circles touch, the line joining the centres passes through the point of contact.

The angles which a chord drawn from the point of contact makes with the tangent, are equal to the angles in the alternate segments.

The rectangles under the segments of intersecting chords are equal.

If  $OA \cdot OB = OC^2$ ,  $OC$  is a tangent to the circle through  $A$ ,  $B$ , and  $C$ .

Triangles of the same altitude are as their bases.

A line parallel to the base of a triangle divides the sides proportionally, with converse.

If a vertical angle of a triangle be bisected, the bisector divides the base into segments that are as the sides, with converse.

The analogous proposition when the exterior angle at the vertex is bisected, with converse.

If two triangles are equiangular, the sides are proportional.

If the sides of two triangles are proportional, the triangles are equiangular.

If the sides of two triangles about equal angles are proportional, the triangles are equiangular.

If two triangles have an angle in each equal, and the sides about two other angles proportional, the remaining angles are equal or supplemental.

Similar triangles are as the squares on corresponding sides.

The perpendicular from the right angle of a right-angled triangle on the hypotenuse divides the triangle into two which are similar to the original triangle.

In equal circles angles, whether at the centres or circumferences, are proportional to the arcs on which they stand.

The areas of two similar polygons are as the squares on corresponding sides.

If three lines be proportional, the first is to the third as the figure on the first to a similar figure on the second.

Questions and easy deductions on the preceding constructions and theorems.

It is recommended that the study of formal demonstrative Geometry be preceded by a course in Practical Geometry, extending over not more than a year, and embracing the following:—

Definitions: fundamental geometric conceptions and principles; use of simple instruments, as compasses, protractor, graduated rule, etc.; measurement of lines and angles, and construction of lines and angles of given numerical magnitude; accurate construction of figures; some leading propositions in plane geometry reached by induction as a result of accurate construction of figures; deduction also employed as principles are reached and assured. At the examination, questions may be given in Practical



Geometry, the constructions being such as naturally spring from the prescribed course. Candidates must provide themselves with a graduated ruler, compasses, set-square and protractor.

In the formal deductive Geometry modifications of Euclid's treatment of the subject will be allowed, though not required, as follows:—

The employment of the "hypothetical construction".

The free employment of the method of superposition including the rotation of figures about an axis, or about a point in a plane.

A modification of Euclid's parallel postulate.

A treatment of ratio and proportion restricted to the case in which the compared magnitudes are commensurable.

One examination paper.

### Experimental Science.

CHEMISTRY:—An experimental study of the following elements and their more important compounds: hydrogen, oxygen, sulphur, sodium, potassium, nitrogen, chlorine, bromine, iodine, carbon, calcium. The course of work should be arranged so as to give the pupils a knowledge of the following: Mixtures, solutions, compounds, and elements, and their various properties and reactions; acids, bases, and salts. Fundamental laws and principles, as: conservation of mass, definite proportions, multiple proportions, valency, proportions by volume in which gases react. The quantitative meaning and use of chemical symbols, formulae and equations. Chemical nomenclature. Simple quantitative experiments and problems. The application of chemistry to the industries, illustrated by an account of the commercial manufacture and use of some of the more important substances included in this course.

PHYSICS.—An experimental course defined as follows, and including simple problems:

ELECTRICITY AND MAGNETISM:—Laws of magnetic attraction and repulsion; magnetic lines of force; phenomena of induction; inclination and declination of the compass. Production and detection of electricity. Electrical conductors and insulators; electroscopes and their construction, electrical conduction through air, radioactivity illustrated by means of uranium and thorium salts. Electrical conduction in liquids: electrolysis, electroplating and electrotyping. Voltmeters, storage and voltaic cells; simple notions of potential, Ohm's law, electrical units; galvanometers and voltmeters; laws of resistance divided circuits; experimental determination of



current strength, resistance and electromotive force; current induction and its general laws, the transformer, the induction coil, dynamo, telephone, motor; ether waves, Röntgen rays, and wireless telegraphy.

HEAT.—Nature and sources of heat. Relation between volume and the temperature of a gas (Charles' Law). Absolute temperature. Change of state. Latent heat, specific heat, transmission of heat.

SOUND.—Vibrations, transversal vibrations, illustrated with pendulums, rods, strings, membranes, plates; longitudinal vibrations illustrated with rods, strings, and columns of air. Production, propagation, and detection of sound waves, manometric flames. Velocity of sound, pitch; standard forks (acoustical  $C=512$ , musical  $A=870$ ). Vibration of air in organ pipes; nodes and loops in vibrating air columns and in vibrating strings; wave lengths and velocity relations. Laws of vibration of strings; interference phenomena; beats, resonance, reflection and absorption of sound.

LIGHT.—The ether, the wave theory of light, rectilinear propagation, image through a pin hole, beam, pencil; photometry, shadow and grease spot photometers. Reflection and scattering of light; laws of reflection, images in plane mirrors, concave and convex mirrors, drawing images. Refraction, laws and index of refraction. Total reflection. Path through a prism. Lenses: drawing image produced by a lens by use of critical rays. Simple microscope. Dispersion and colour. Spectrum; recombination of light. Camera.

## FOR HONOURS.

### Greek.

Translation into English of passages from the prescribed texts, with questions thereon.

Translation at sight of prose passages of average difficulty from Xenophon's historical works.

Translation into Greek of sentences (based upon Xenophon's vocabulary) to test the candidate's scholarship in matters of accidence, syntax and phraseology.

The following are the prescribed texts:—

1915, 1916, 1917: Xenophon, *Hellenica* (Philpotts' Selections, sections I. and II.), Homer, *Iliad* I., 1-350; III., 121-244; VI., 66-118, and 237 to the end; *Odyssey* VI. and IX.

Two papers will be set: (1) prescribed texts; (2) translation at sight and Greek prose composition.

**Latin.**

Translation into English of passages from prescribed texts.

Translation at sight of passages of average difficulty from Cæsar.

Grammatical questions on the passages from prescribed texts and such other questions as arise naturally from the context.

Translation into Latin of English sentences to illustrate Latin syntax and continuous passages of English, based on Cæsar.

The following are the prescribed texts:—

Cæsar, *De Bello Gallico*, Book I.; Horace, *Odes*, Book I., 1, 2, 5, 6, 10, 14, 22, 24, 31, 34, 35, 38; Book II., 3, 10, 14, 15, 16, 18; Book III., 1, 2, 3, 4, 5, 13, 21, 23, 24, 25, 29, 30; Book IV., 2, 4, 5, 7, 15.

1915: Virgil, *Æneid*, Book I., vv. 1-510, or Book II., vv. 1-505; Cicero, *In Catilinam*, I. and III.

1916, 1917: Virgil, *Æneid*, Book I., vv. 1-510, or Book II., vv. 1-505; Cicero, *Pro Lege Manilia*.

Two examination papers: (1) Latin prose; (2) authors and sight translation.

**English.**

COMPOSITION: An essay on one of several themes set by the examiners.

One examination paper.

LITERATURE: The candidate will be expected to have memorized some of the finest passages. Besides questions to test the candidate's familiarity with, and comprehension of, the following selections, questions may also be set to determine within reasonable limits his power of appreciating literary art.

The candidate shall produce satisfactory proof by the certificate of the principal of the school from which he comes or otherwise that he has read carefully, during the preceding year, at least four suitable works in English literature (both prose and poetry) in addition to those prescribed below for examination.

One examination paper.

1915: Wordsworth, *Michael*, *Influence of Natural Objects*, *Nutting*, *Elegiac Stanzas*, *To the Rev. Dr. Wordsworth*, *To the Cuckoo*, "Bright flower! whose home," and the following eight sonnets: "It is not to be thought of," "Dark and more dark the shades of evening fell," "O friend! I know not," "Milton! thou shouldst," "Surprised by joy—impatient as the wind," "Hail twilight, sovereign of our peaceful hour," "I thought of Thee, my partner and my guide," "Such age, how beautiful"; Tennyson, *The Epic and Morte d'Arthur*, *Ænone*, *The Brook*, and the following sections of "In Memoriam": XXVII, LXIV, LXXXIII, LXXXVI, CI, CXIV, CXV, CXVIII, CXXIII; Shakespeare, *Merchant of Venice*, *Henry IV*, Part I.

Passages for memorization.—

Wordsworth: "To the Cuckoo," "It is not to be thought of," "O friend! I know not," "Milton, thou shouldst," "Hail twilight, sovereign of our peaceful hour", "I thought of Thee, my partner and my guide".

Tennyson: *Morte d'Arthur*, ll. 246-255; *Ænone*, ll. 1-15, ll. 144-150, The lyric stanzas in "The Brook"; In *Memoriam*: LXIV, LXXXIII, LXXXVI, CI, CXV, CXVIII.

Shakespeare—*The Merchant of Venice*:—

Act I, Sc. 1, ll. 79- 99. Let me play . . . their brothers fools.

Act II, Sc. 9, ll. 36- 49. Who chooseth me . . . to be new varnished.

Act IV, Sc. 1, ll. 184-205. The Quality of mercy . . . the deeds of mercy.

Act V, Sc. 1, ll. 54- 65. How sweet the moonlight . . . cannot hear it.

Act V, Sc. 1, ll. 102-108. The crow doth sing . . . true proportion.

1916: Coleridge, *The Ancient Mariner*; Tennyson, *Lotos Eaters*, *Ulysses*, "Of old sat Freedom," *Locksley Hall*, *Songs from the Princess*, *Ode on the Duke of Wellington*, *Charge of the Light Brigade*, *Enoch Arden*; Shakespeare, *Julius Cæsar*, *Midsummer Night's Dream*.

1917: Tennyson, *The Lady of Shalott*, *St. Agnes' Eve*, "Come not when I am dead," "Break, break, break," In the *Valley of Caunteretz*, *Elaine*; Browning, *My Last Duchess*, "All service ranks the same with God," *Cavalier Tunes*, *The Boy and the Angel*, *Home Thoughts from Abroad*, *Up at a Villa*, *Love among the Ruins*, *The Guardian Angel*, *Prospice*; Shakespeare, *Macbeth*, *As You Like It*.

Passages for memorization:—

Tennyson: *St. Agnes' Eve*, "Break, break, break"; In the *Valley of Caunteretz*. Browning: "All service ranks the same with God"; *Home Thoughts from Abroad*; *Prospice*.

Shakespeare—*Macbeth*:—

Act I, Sc. 5, ll. 16-31. LADY M. Glamis thou art . . . crown'd withal.

Act I, Sc. 7, ll. 1-28. MACB. If it were done . . . on the other.

Act II, Sc. 1, ll. 33-64. MACB. Is this a dagger . . . to hell.

Act III, Sc. 2, ll. 4-26. LADY M. Nought's had . . . him further.

Act III, Sc. 2, ll. 45-56. MACB. Be innocent . . . go with me.

Act V, Sc. 3, ll. 22-28. MACB. I have lived . . . dare not.

Act V, Sc. 3, ll. 39-45. MACB. Cure her . . . the heart?

Act V, Sc. 5, ll. 16-28. SEY. The Queen . . . signifying nothing.

Shakespeare—As You Like It:—

Act II, Sc. 1, ll. 1- 18. DUKE S. Now, my co-mates . . . change it.

Act II, Sc. 5. The Songs.

Act II, Sc. 7, ll. 12- 34. JAQ. A fool! . . . only ear.

Act II, Sc. 7, ll. 139-166. JAQ. All the world's . . . sans everything.

Act II, Sc. 7, ll. 174-190. AMIENS. The Song.

### German.

The prescription of work in grammar, the translation of English into German and sight translation, is the same for honours as for pass, but the examination will be of a more advanced character.

The following are the prescribed texts:—

1915: Four German Plays, ed. Manley and Allen (Ginn & Co.) omitting *Im Wartesalon erster Klassi*; Heyse, *Das Mädchen von Treppi*.

1916: *Isolde Kurz, Die Humanisten*; Fulda, *Uter vier Augen*; German Poems, edited by Burkhard (Henry Holt & Co.).

1917: Moser, *Der Bibliothekar*, Heyse, *L'Arrabbiata*.

### French.

The prescription of work in grammar, the translation of English into French and sight translation, is the same for honours as for pass, but the examination will be of a more advanced character.

The following are the prescribed texts:—

1915: Halévy, *L'Abbé Constantin*.

1916: About, *Le Roi des Montagnes*, and Theuriet, *L'Abbé Daniel* (Blackie's *Longer French Texts*).

1917: Malot. *Remi en Angleterre* (Pitt Press).

### History.

Outline of Mediæval History from the Barbarian Invasion to the Discovery of America. Study in greater detail of the period from the Discovery of America to the death of Queen Elizabeth, 1492-1603. The geography relating to the history prescribed. One examination paper.

Outlines of Modern History from the death of Queen Elizabeth to the Treaty of Paris, 1603-1763. Study of Modern History in detail, 1763-1885. The geography relating to the history prescribed. One examination paper.

# Mathematics.

**ALGEBRA:** Elementary rules; highest common measure; lowest common multiple; fractions; square root; simple equations of one, two and three unknown quantities; indices, surds, quadratics of one and two unknown quantities; theory of divisors; ratio, proportion and variation; progressions; notation; permutations and combinations, binomial theorem; interest forms; annuities.

One examination paper.

**TRIGONOMETRY.**—Trigonometrical ratios with their relations to each other; sines, etc., of the sum and difference of angles with deduced formulas; use of logarithms; solution of triangles; expressions for the area of triangles; radii of circumscribed, inscribed and escribed circles.

One examination paper.

**PROBLEMS:** One paper.

**GEOMETRY: A.**—Exercises on the course prescribed for the pass examination, with special reference to the following topics:—loci; maxima and minima; the system of inscribed, escribed and circumscribed circles of a triangle, with metrical relations; radical axis.

**B.**—The following additional propositions in Synthetic Geometry, with exercises thereon:—

To divide a given straight line internally and externally in medial section.

To describe a square that shall be equal to a given rectilinear figure.

To describe an isosceles triangle having each of the angles at the base double of the third angle.

To inscribe a regular pentagon in a given circle.

The squares on two sides of a triangle are together equal to twice the square on half the third side and twice the square on the median to that side.

If ABC be a triangle, and A be joined to a point P of the base such that  $BP : PC = m : n$ , then  $nAB^2 + mAC^2 = (m + n) AP^2 + nBP^2 + mPC^2$ .

In a right-angled triangle the rectilinear figure described on the hypotenuse is equal to the sum of the similar and similarly described figures on the two other sides.

If the vertical angle of a triangle be bisected by a straight line which also cuts the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the segments of the base, together with the square on the straight line which bisects the angle.



If from the vertical angle of a triangle a straight line be drawn perpendicular to the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circle described about the triangle.

The rectangle contained by the diagonals of a quadrilateral inscribed in a circle is equal to the sum of the two rectangles contained by its opposite sides.

Two similar polygons may be so placed that the lines adjoining corresponding points are concurrent.

If a straight line meet the sides BC, CA, AB, of a triangle ABC in D, E, F, respectively, then BD, CE, AF = DC, EA, FB, and conversely. (Menelaus' Theorem.)

If straight lines through the angular points A, B, C of a triangle are concurrent, and intersect the opposite sides in D, E, F, respectively, then BD, CE, AF = DC, EA, FB, and conversely. (Ceva's Theorem.)

If a point A lie on the polar of a point B with respect to a circle, then B lies on polar of A.

Any straight line which passes through a fixed point is cut harmonically by the point, any circle, and the polar of the point with respect to the circle.

In a complete quadrilateral each diagonal is divided harmonically by the two other diagonals, and at the angular points through which it passes.

C.—ELEMENTARY ANALYTICAL GEOMETRY: Axes of co-ordinates. Position of a point in plane of reference.

Transformation of co-ordinates,—origin changed, or axes (rectangular) turned through a given angle.

$$\pm 2 A = x_1 (y_2 - y_3) + \dots + \dots$$

Co-ordinates of point dividing line joining  $P_1 (x_1, y_1)$  and  $P_2 (x_2, y_2)$  in ratio  $m : n$  are  $x = \frac{m x_2 + n x_1}{m + n}, y = \frac{m y_2 + n y_1}{m + n}.$

$$(P_1 P_2)^2 = (x_1 - x_2)^2 + (y_1 - y_2)^2$$

Equations of straight lines.

$$\left. \begin{aligned} \frac{x - x_1}{x_1 - x_2} &= \frac{y - y_1}{y_1 - y_2} \\ \frac{x}{a} + \frac{y}{b} &= 1. \\ \frac{x - a}{\cos \theta} &= \frac{y - b}{\sin \theta} = r \\ y &= mx + b. \\ y &= m(x - a). \\ x \cos a + y \sin a &= p. \end{aligned} \right\} \begin{array}{l} \text{Line defined by two points} \\ \text{through which it passes.} \\ \\ \text{Line defined by one point} \\ \text{through which it passes,} \\ \text{and by its direction.} \end{array}$$

General equation of 1st degree,  $Ax + By + C = 0$ , represents a straight line.

Any line through  $(x_1, y_1)$  is  $A(x - x_1) + B(y - y_1) = 0$ .

If  $\theta$  be angle between  $Ax + By + C = 0$  and  $A'x + B'y + C' = 0$ , then

$$\tan \theta = \frac{A'B - AB'}{AA' + BB'}$$

Condition of  $\perp$  rity,  $AA' + BB' = 0$ .

Condition of  $\parallel$  ism,  $\frac{A}{A'} = \frac{B}{B'}$ .

Distance from  $(a, b)$  to  $Ax + By + C = 0$ , in direction whose direction cosines are  $(l, m)$  is  $= \frac{Aa + Bb + C}{Al + Bm}$ .

$\perp$  distance from  $(a, b)$  on  $Ax + By + C = 0$ .  
 $= \pm \frac{Aa + Bb + C}{\sqrt{A^2 + B^2}}$

# THE CIRCLE—

Equations in forms:

$$\begin{aligned} x^2 + y^2 &= r^2 \\ (x - a)^2 + (y - b)^2 &= r^2 \\ x^2 + y^2 - 2rx &= 0. \end{aligned}$$

General equation  $x^2 + y^2 + 2Ax + 2By + C = 0$ ,

$$\text{or } (x + A)^2 + (y + B)^2 = A^2 + B^2 - C,$$

represents a circle with centre  $(-A, -B)$  and radius  $\sqrt{A^2 + B^2 - C}$ .

Tangent at  $(x', y')$  to  $x^2 + y^2 = r^2$ , is  $xx' + yy' = r^2$ .

Normal is  $\frac{x}{x'} = \frac{y}{y'}$ .

Tangent in form  $y = mx \pm r\sqrt{1 + m^2}$ .

Pole being  $(x', y')$ , polar is  $xx' + yy' = r^2$ .

If pole move along a line, polar turns about pole of that line.

Square of tangent from  $(x', y')$  to  $x^2 + y^2 + 2Ax + 2By + C = 0$   
 is  $x'^2 + y'^2 + 2Ax' + 2By' + C$ .

Radical axis of  $x^2 + y^2 + 2Ax + 2By + C = 0$ ,

$$x^2 + y^2 + 2A'x + 2B'y + C' = 0.$$

Easy exercises on the preceding propositions

One examination paper.

## Physics.

**MECHANICS.**—Measurement of velocity; uniformly accelerated rectilinear motion; momentum; energy; force; metric units of force, work, energy and power. Equilibrium of forces acting at a point; triangle, parallelogram, and polygon of forces; parallel forces; principle of moments; centre of gravity; laws of friction; numerical examples.

**PROPERTIES OF MATTER.**—An experimental course illustrating the following topics: transmutation of energy; conservation of energy; kinetic theory of matter; heat, a mode of motion; absolute temperature; mechanical equivalent of heat. Fluid pressure at a point, pressure on a horizontal

plane, pressure on an inclined plane, resultant vertical pressure and resultant horizontal pressure, when liquid is under air pressure and when it is not; transmission of pressure; Bramah press; calculations relating to the preceding.

NOTE.—The examination problems based on the foregoing prescription in Mechanics and Properties of Matter, will be of a somewhat less difficult character than those hitherto set.

THE FLOW OF FLUIDS AND RELATED PHENOMENA.—An experimental course defined as follows: definition of stream line; definition of tube of flow; definition of steady motion; velocity of efflux from an orifice in a vessel containing water:— $V^2 = 2gh$  (Torricelli's theorem); pressure along a tube of flow given by  $\rho + \frac{1}{2}\rho V^2 + g\rho h = \text{a constant}$  (Bernoulli's theorem); applications of Bernoulli's theorem to explain the principle of an atomiser, a bunsen filter pump, a steam injector, the curve of flight of a ball, the Venturi water meter.

SURFACE TENSION AND CAPILLARY PHENOMENA.—A simple experimental treatment of the following topics: Experiments showing the existence of surface tension in liquids; the variation of surface tension with the liquid used; the effect of temperature on surface tension; measurement of surface tension of water and other liquids in grams per centimeter or ounces per inch; surface tension due to attractive forces between the molecules; surface tension dependent upon the nature of the surfaces in contact; surface energy measured by  $T \times A$  where  $T$  is the value of the surface tension and  $A$  the area of the surface; surface energy a minimum; the rise and fall of liquids in capillary tubes, the spherical form assumed by small drops; dyeing, and filtration, shown to be illustrations of the tendency of surface energy to be reduced to a minimum; pressure within a soap bubble.

### Chemistry.

An experimental course defined as follows: Chemistry of the Middle School reviewed and continued. Reversible reactions. Chemical equilibrium. Rate of reaction and conditions that affect it (including catalysis). A study of the following elements and their most characteristic compounds, having regard to Mendeleeff's classification and to their most important economic and industrial applications, hydrogen, sodium, potassium, magnesium, zinc, calcium, strontium, barium, aluminium, carbon, silicon, tin, lead, nitrogen, phosphorus, arsenic, antimony, bismuth, oxygen, sulphur, fluorine, chlorine, bromine, iodine, iron, copper.

### Biology.

ZOOLOGY.—Practical study of the external form of all types, and the dissection or the study of prepared specimens (or models), as specified below. Observational drawings are essential. An elementary knowledge of the chief functions of the body—nutrition, irritability, motility, excre-

tion, reproduction—and of the mode of life and the life history of the various types. Study of the principles of classification in any one group, and recognition of the commonest forms in all.

**THE FROG.**—Practical study of the external features; skeleton; visceral dissection; central nervous system; action of a typical muscle. Practical study of a cross-section for arrangement of organ systems. Observation of external features of development.

**THE FISH.**—Practical study of the external form; chief visceral organs; circulation and respiration; comparison with frog as to organs of locomotion, circulation, and respiration.

**THE REPTILE.**—Practical study of the external form of a snake and a turtle. Comparison with a lizard.

**THE BIRD.**—Practical study of the external form, plumage, and skeleton of some common bird. Adaptations to flight. Modification of bill and foot, in so far as they are of value in distinguishing the different chief types.

**THE MAMMAL.**—Practical study of the chief features of the skeleton, the visceral organs, and the chief divisions of the brain of a rabbit or a cat. Major characteristics of mammalian dentition and foot structure, as illustrated by the pig, horse, sheep, rabbit, dog, mole, and bat.

**THE WORM.**—Practical study of the external features, and dissection of the earth-worm. Study of cross-section for arrangement of chief organ systems only.

**THE ARTHROPOD.**—Practical study of the external form of the crayfish, including segmentation and appendages. Comparison of the external form of the crayfish, grasshopper (or cricket), millipede, and spider.

**THE MOLLUSC.**—Practical study of the external form, and mode of locomotion and respiration, of the fresh-water clam; comparison in these respects with the snail.

**THE PROTOZOAN.**—A practical study of the living amœba or paramœcium.

**NOTE.**—Dissection of at least the frog and the earth-worm by the pupil will be required. In other cases, prepared specimens or models may be used. Cross-sections will be studied with the low power microscope.

**BOTANY.**—General types of the great natural groups of plants; classification.

**MORPHOLOGY.**—Morphology of seed, root, stem, leaf, flower, and fruit. A study of the cellular structure of the leaf and of the relative arrangement of the more important tissues and tissue-systems of the stem and root (as shown by sections) of bean and maize, or of any other typical dicotyledon and monocotyledon.

PHYSIOLOGY.—Practical studies of absorption (osmosis), plasmolysis, transpiration, photosynthesis, respiration, irritability (*e.g.*, heliotropism), growth and movement. An elementary knowledge of the phenomena of fertilization and reproduction.

ECOLOGY.—Modifications of organs for special functions. Seed dispersal. Light relations, Pollination and adaptations for cross-pollination. Plant associations, *e.g.*, mesophytes, hydrophytes, xerophytes.

CRYPTOGAMS.—The practical study of representatives of the chief subdivisions of the cryptogams; *spirogyra*, *chara*, a mushroom, a lichen, a liverwort, a moss, a horsetail, a clubmoss, and a fern. Distribution and economic importance of yeasts and bacteria. Microscopic structure of the yeast cell; reproduction by budding. Macroscopic observation of a bacterial colony.

PHANEROGAMS.—The practical study of representatives of the seed plants of the locality, including at least one member of each of the following orders: Coniferae, Carophyllaceae, Ranunculaceae, Cruciferae, Rosaceae, Leguminosae, Sapindaceae, Umbelliferae, Ericaceae, Labiatae, Scrophulariaceae, Boraginaceae, Compositae, Gramineae (so far as the structure of the flower and stem is concerned), Liliaceae.

NOTE.—As form becomes intelligible only in the light of a knowledge of function and adaptation, it is advisable that the physiological and ecological studies should be taken up in appropriate connection with the morphological. It is also to be emphasized that the making of faithful and neat records of observations is a most important adjunct. In many cases these should be expressed as drawings, but it should be borne in mind that drawing loses much of its value as an educative factor unless there be an insistence on absolute accuracy and the careful naming of all the features represented. Judgment should, therefore, be exercised in requiring no more than can be done well.



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**FACULTY OF ARTS.**

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**DEGREE OF BACHELOR OF ARTS.****I. ENTRANCE.**

1. There are two ways of entering the Faculty of Arts, by passing either (a) the Junior Matriculation Examination, with or without Honours, or (b) the Senior Matriculation Examination.

**(A)—By Junior Matriculation.**

2. The subjects of Junior Matriculation are:—Latin, English, History, Mathematics, and any two of the following—Greek, German, French, Experimental Science. A candidate who has Junior Matriculation without Honours can be admitted only to the General Course of the First Year. A candidate preparing to enter an undergraduate Special Course should select his options so as to meet the requirements of that course. See Sections 60 and 25.

3. The pass standard is forty per cent. of the marks assigned to a paper with an average of sixty per cent. and with such modification or exceptions as may be deemed proper in consideration of the total number of marks and the confidential reports of the Principal.

4. A candidate who has obtained the average of sixty per cent. on all the papers but has failed to obtain forty per cent. in at most three of the papers may complete Junior Matriculation by obtaining forty per cent. on each of these papers at any one subsequent examination.

5. A candidate who has obtained forty per cent. on each of at least eight papers, with an average of sixty per cent. on the same, will be credited with these papers. In order to complete his matriculation he must obtain, at one subsequent examination, forty per cent. on each of the remaining papers, with an average of sixty per cent.

6. The annual examinations for Junior Matriculation are held in June and September by the Education Department, under the direction of the University Matriculation Board.

7. Certificates of examinations recognized as equivalent in value may be accepted *pro tanto* for Junior Matriculation.

8. In view of recent advances in the standards for Junior Matriculation, only those certificates which meet the requirements of this University as to subjects and percentages will be accepted for matriculation.

9. The regulations respecting Junior Matriculation with the schedule of examinations which may be accepted are to be found in the Curriculum for Junior Matriculation.

**(B)—By Senior Matriculation.**

10. The Senior Matriculation examination is the same as that of the First Year, and a successful candidate ranks thereafter as an undergraduate in the Faculty of Arts.

11. The subjects and standards for Senior Matriculation are those prescribed for the General Course or for a Special Course of the First Year.

12. A student (a) who is entitled to complete his Junior Matriculation by passing in at most three papers (see section 4), or (b) who is over twenty-one years of age and has no qualifying certificate, when writing on the examination of the First Year, is held to be a candidate for Senior Matriculation. Such a student, when in attendance on lectures, is known as a non-matriculated student.

13. The Senior Matriculation examination may be taken without attendance on lectures in the University, except in the case of those Special Courses in which laboratory work is required.

14. Where laboratory work is prescribed in a subject of the General Course of the First Year, a student taking Senior Matriculation without attendance at the University is required to complete such work, together with any other deficiencies of the First Year, before he is eligible for registration in the Third Year.

15. A candidate for Senior Matriculation without attendance on lectures at the University must not be less than sixteen years of age on or before the first of October preceding the examination at which he presents himself.

16. The annual examinations for Senior Matriculation are held in May, June, and September.

17. Certificates of examinations recognized as equivalent in value to the examination of the First Year may be accepted *pro tanto* for Senior Matriculation. See Section 61.

18. The acceptance of certificates of equivalent examinations makes it possible under definite conditions for matriculated and non-matriculated students to enter the General Course or certain Special Courses at the Second Year. See Sections 29 to 33.

## II. PROCEDURE FOR ADMISSION.

### (a) Entrance at any Year.

19. A student on applying for permission to enter upon a course of study in any Year is required to present to the Registrar of the University any certificates on which he may be granted (1) Junior Matriculation in whole or in part, (2) Senior Matriculation in whole or in part, or (3) exemption from instruction and examination in subjects of the General Course of the First Year, or (4) any other evidence of ability to take the work proposed.

20. An applicant holding a certificate from the Education Department of a Province of the Dominion other than Ontario must submit an official statement of marks with his application for admission.

21. An applicant should secure the necessary blank forms from the Registrar of the University, return them to him, when properly filled out, **and await the decision of the Committee on Admissions before leaving for Toronto.**

22. Every applicant for admission must produce satisfactory certificates of good character.

**(b) Entrance at the First Year.**

23. Applications for admission to the First Year will be considered from the following classes of students:—

(a) From the student who has complete Junior Matriculation. This includes those students who possess certificates accepted by the University as equivalent to Junior Matriculation. Such a student when admitted becomes an undergraduate in the Faculty of Arts. For list of equivalent certificates see Junior Matriculation Curriculum.

(b) From the student who is entitled to complete his Junior Matriculation by passing in at most three papers. Such a candidate, when admitted, is known as a non-matriculated student and is required to complete Junior Matriculation in order that he may be eligible for registration in the Second Year.

(c) From the student without qualifying certificates who is over twenty-years of age. Such a candidate, when admitted, is known as a non-matriculated student and is required to complete Senior Matriculation in order that he may be eligible for registration in the Second Year.

(d) From the student who is not proceeding to a degree in Arts, *i.e.*, from an occasional student. Such a student is admitted only on special petition and from session to session.

24. On or before the first of October of the session in which he applies for registration, a matriculated student or undergraduate must have completed the sixteenth year of his age; a non-matriculated student or candidate for Senior Matriculation should have completed the nineteenth year of his age, and an occasional student must have completed the nineteenth year of his age.

25. A student (undergraduate, non-matriculated, or occasional) who desires admission to the classes of the First Year in any of the languages, Greek, Latin, German, French, in which he has not passed the Matriculation examination, and the student whose last examination in Latin was prior to 1913, must first satisfy the College in which he seeks enrolment, of his ability to undertake the work of these classes. The colleges do not undertake to provide instruction in elementary Greek, Latin, German, and French.

26. On or before the fifteenth day of September the student who desires to attend the University as a non-matriculated or occasional student should submit to the Registrar of the University an application for permission to attend lectures in the University or its Colleges. The applicant must satisfy the authorities of the University and of his College, by certificate or otherwise, before registration, of his ability to undertake the work of the class or classes he proposes to attend.

27. A candidate who has Junior Matriculation without Honours can be admitted only to the General Course of the First Year.

28. Unless special permission is granted by the Council, every student entering a Special Course of the First Year must have secured honour standing at matriculation or at an equivalent examination in at least three of —Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry.

**(c) Entrance at the Second Year.**

29. A candidate holding any one of the certificates mentioned in section 61, which covers the work of the First Year with the exception of one subject, may enter at the Second Year, but will be required to pass in such subject at a subsequent examination, prior to admission to the Third Year. Thus where this subject is a Science of the First Year General Course, the practical work must be completed before the candidate is eligible for registration in the Third Year.

30. The only courses open to a student entering at the Second Year are the General Course and on conditions to be determined by the Council, the Special Courses in Political Science and in Philosophy.

31. A matriculated student entering the Second Year must have completed the seventeenth year of his age on or before the first of October of the session in which he proposes to enter.

32. A non-matriculated student desiring to enter the Second Year should be not less than twenty years of age.

33. A non-matriculated student in attendance upon lectures, proceeding regularly to the degree must complete either Junior Matriculation as under section 23*b*, or Senior Matriculation as under section 23*c*, before he is eligible for registration in the Second Year, except that, in the case of a student not in attendance on lectures at the University, the practical work in a Science of the First Year General Course, must be completed before he is eligible for registration in the Third Year.

**(d) Admission Ad Eundem Statum.**

34. An undergraduate of another University may be admitted *ad eundem statum* on such conditions as the Senate on the recommendation of the Council of the Faculty may prescribe.

35. An applicant for admission *ad eundem statum* must submit with his petition (1) a calendar of his University giving a full statement of the courses of instruction, (2) an official certificate of character and academic standing.

36. Such an applicant may not compete for scholarships at his first examination if admitted to a standing lower than he held in his own University, but, if he obtain honours, he shall subsequently enjoy the same rights and privileges as if he had been originally an undergraduate of this University.



### III. REGISTRATION AND ENROLMENT.

37. Every student in attendance proceeding to the degree of Bachelor of Arts is required to register in the University and to enrol in either University College, or Victoria College, or Trinity College, or St. Michael's College.

38. Registration in the University may take place on and after the first of September, and must be completed by the student in person on or before the twenty-ninth of September, 1914.

39. Enrolment with the instructors of the University and of the Colleges will begin at 9 a.m. on the twenty-eighth of September and must be completed by 5 p.m. on the twenty-ninth of September, 1914.

40. After the twenty-ninth of September no student, matriculated, non-matriculated, or occasional, will be allowed registration for the whole or part of the session 1914-1915, without the consent of the Council.

41. Every petition for registration subsequent to the twenty-ninth of September and prior to the first of November, must be accompanied by a sum of money reckoned at one dollar per diem for each day after the twenty-ninth of September.

42. A student who has not enrolled in a subject or subjects on or before the twenty-ninth of September, may, at the discretion of the head of the department concerned, be refused admission to the classes or laboratories, until he shall have satisfied the head of the department that he is competent to proceed with the class. In order to qualify himself for admission such a student may be required to obtain tuition at his own expense.

43. A non-matriculated student, or a student who, having failed to obtain standing, is repeating a year, will be admitted on probation only, and will be allowed to register for the Easter Term, only on the recommendation of his College and with the consent of the Council.

### IV. REGULATIONS RELATING TO STUDENTS IN ATTENDANCE.

44. No student will be enrolled in any year, or be allowed to continue in attendance, whose presence for any cause is deemed by the Council of the Faculty to be prejudicial to the interests of the University.

45. Students proceeding regularly to the degree are required to attend the courses of instruction and the examinations in all subjects prescribed for students of their respective standing, and no student will be permitted to remain in the University who persistently neglects academic work.

46. Unless special permission is granted by the Council, a student who, at the close of two sessions, has failed to secure standing in his year, will not be permitted further registration in the Faculty of Arts.

47. A non-matriculated student, or a student who, having failed to obtain standing, is repeating a year, will be admitted on probation only, and will be allowed to register for the Easter Term, only on the recommendation of his College and with the consent of the Council.

48. Any student who may be convicted of having taken part in processions through the city, which have not been authorized by the police authorities after application by the Executive of the Council of the Undergraduates, will be severely disciplined.

49. All interference on the part of any student with the personal liberty of another by arresting him, or summoning him to appear before any tribunal of students, or otherwise subjecting him to any indignity or personal violence, is forbidden by the Council of the Faculty. In particular, students are warned against the practices known as the "hustling" of freshmen and against inter-year or inter-faculty "hustles". Any student convicted of participation in such proceedings will render himself liable to expulsion from the University.

50. A student who is under suspension, or who has been expelled from a College or from the University, will not be admitted to the University buildings or grounds.

51. The constitution of every society or association of students in the Faculty of Arts and all amendments to any such constitution must be submitted for approval to the Council of the Faculty. All programmes of such societies or associations must, before publication, receive the sanction of the Council of the Faculty through the President. Permission to invite any person not a member of the Faculty of Arts to preside at or address a meeting of any society or association must be similarly obtained. Societies and associations are required to confine themselves to the objects laid down in their constitution.

52. The name of the University is not to be used in connection with a publication of any kind without the permission of the Caput.

## V. FEES.

For the schedule of fees see page 52.

## VI. COURSES LEADING TO THE DEGREE.

53. A candidate for the degree of Bachelor of Arts must take one of the courses prescribed by the University.

54. The courses for the degree of Bachelor of Arts extend over a period of four academic years.

55. Unless specially exempted by the Council, every undergraduate proceeding to the degree must be in attendance on lectures at the University and at one of the Colleges throughout the session in all the subjects of his academic year.

56. Unless in exceptional cases and by special petition to the Council, no student will be allowed registration in more than two Courses in the First year, and in not more than one in any subsequent year.

57. The courses leading to the degree of Bachelor of Arts are:

(a) The General Course.

(b) The following Special Courses:

Classics.	Physics.
Greek and Hebrew.	Biology.
Oriental Languages.	Biological and Physical Sciences.
Modern Languages.	Physiological and Biochemical Sciences.
English and History.	Chemistry and Mineralogy.
Modern History.	Geology and Mineralogy.
Political Science.	Household Science.
Commerce and Finance.	Physiology and Household Science.
Philosophy.	
Mathematics and Physics.	

(c) The Arts and Forestry Course.

58. A candidate who has Junior Matriculation without Honours can be admitted only to the General Course of the First Year.

59. Unless special permission is granted by the Council, every student entering a Special Course of the First Year must have secured honour standing at matriculation or at an equivalent examination in at least three of:—Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry.

60. The requirements in Honour subjects at matriculation for entrance to the Special Courses are as follows:—

Classics:—Greek, Latin and at least one of the remaining subjects mentioned in Section 59.

Greek and Hebrew:—Greek, and at least one of the remaining subjects mentioned in Section 59.

Modern Languages:—German, French, and at least one of the remaining subjects mentioned in Section 59.

English and History (Class.):—Greek, Latin, English, and at least one of the remaining subjects mentioned in Section 59.

English and History (Mods.): at least Latin, French, German, and one of the remaining subjects mentioned in Section 59.

Modern History:—Three of Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry.

Political Science	} Any three of the subjects mentioned in Section 59 of which one must be a Foreign Language.
Commerce and Finance:	

Mathematics and Physics: Mathematics, and at least one of the remaining subjects mentioned in Section 59.

Physics:  
 Biology:  
 Biological and Physical Sciences:  
 Physiological and Biochemical Sciences:  
 Chemistry and Mineralogy:  
 Geology and Mineralogy:  
 Household Science:  
 Physiology and Household Science:

Any three of the subjects mentioned in Section 59, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation, and to select French as one of the three subjects in which honour standing is required.

### Equivalent Examinations—First Year.

61. Certificates of having passed the whole or a part of the following examinations *may* be accepted *pro tanto* for General Course subjects at the examination of the First Year or Senior Matriculation, but while such certificates may be accepted for the theoretical work in Science of the First Year General Course, the practical work, where prescribed, must be done in the laboratories of the University, except as provided for in the second paragraph under "Province of Ontario" in this section.

#### Province of Ontario.

The Honour Junior Matriculation Examination and the Entrance to the Faculties of Education Examination or examinations of the same standard under other titles.

On the report of the staff in Physics, or in Biology, a candidate for the examination of the First Year may be relieved of the practical work in either or in both of these Sciences of the General Course of the First Year provided (*a*) that he submits the note books in which he has recorded his practical work, (*b*) that he presents a certificate from the Principal of the High School or Collegiate Institute, stating that the records submitted are the results of the student's own work, (*c*) that he submits a certificate from the Principal stating that the work performed and described represents, in the case of each Science, at least one hundred hours of laboratory instruction and practical work in the Upper School.

#### Province of Nova Scotia.

Senior Leaving Examination.

#### Province of Manitoba.

First Class Teachers' Examination.

#### Province of British Columbia.

Senior Grade Examination.



**Province of Alberta.**

Standard VIII (Grade XII) Examination.

**Province of Saskatchewan.**

First Class Diploma or Senior Matriculation.

**Newfoundland.**

Associate in Arts Examination.

**Great Britain.**

The local Examinations for Senior students, conducted by the Universities of Oxford and Cambridge.

62. A candidate submitting any of the certificates mentioned in the preceding section must submit an official statement of the marks on which the certificate was obtained.

63. Before exemption is granted on any of the certificates mentioned in Section 61, a candidate may be required to satisfy the authorities of the University, and of his College, as to the equivalence of the examinations for which exemption is sought.

64. In view of the recent change in the standard for passing in the General Course only those certificates which meet these conditions as to subjects and percentages will be accepted.

65. The Senate will consider applications for the recognition of certificates other than those mentioned.

66. A candidate presenting *pro tanto* certificates is eligible for scholarships and for ranking in Special Courses but not for Standing in the General Course.

**Teachers' Courses and Summer Session.**

67. In order to assist teachers and others who are unable to attend the regular classes, special provision has been made for their instruction (1) by Teachers' Courses and (2) by the Summer Session.

68. Teachers' Courses are held during the regular session but at hours convenient for those engaged in school work. They are open to persons actually engaged in teaching and to such others as have been approved by the Council of the Faculty. In all cases application for admission must be made to the Registrar of the University.

69. The Summer Session is held during July and a part of August and is open to any persons who give evidence of ability to follow the classes selected, including regular students who have failed to receive credit in one or at most two subjects of the General Course.

70. In the Teachers' Courses as in the Summer Session provision will be made as far as possible and as the applications warrant for instruction in the subjects of the First and Second Years of the General Course. If a sufficient number of applications is received instruction may also be provided in certain of the Special courses for these years.



71. A candidate for the degree of Bachelor of Arts who is desirous of attending the Teachers' Course shall transmit to the Registrar of the University not later than October 1st of each year, a statement of the work he proposes to take during the session.

72. A candidate who is desirous of attending the Summer Session shall transmit to the Registrar of the University not later than the first day of June a statement of the work he proposes to take during the Summer Session.

73. Only under exceptional circumstances will a candidate be permitted to attend classes in more than two subjects during one session of either the Teachers' Course or the Summer Session.

74. At the close of the session those who have been in attendance may present themselves for examination.

75. The regular examination for Honours occurs in May. A special examination for Honours is held in August in those Special subjects in which instruction has been given during the Summer Session.

76. A successful candidate will receive credit for any subject which is an integral part of either the General or a Special Course.

77. A candidate will not receive credit for a subject of a higher year unless he has passed the examination of the lower year in the same subject. He may, however, be a candidate for examination in the work of two successive years in the same subject.

78. A student who receives credit for subjects taken in the Teachers' Course or in the Summer Session is not eligible for scholarships, standing in the General Course, or Honours in a Special Course.

## VII. CONDITIONS FOR ACADEMIC STANDING.

### Credit in General Course Subjects.

79. No candidate will receive credit in a subject of the General Course unless he obtain at least forty per cent. of the examination marks, as well as forty per cent. of the aggregate of the term and examination marks in that subject.

80. If a candidate, who is exempt from examination in Greek or Latin or German or French, General Course subjects attached to the Special Courses of the First Year, obtains a minimum of fifty per cent. on any one or more of these subjects as a Special subject of the First Year, he shall be exempt in the Second Year from examination in these subjects as General Course subjects of the Second Year. Credit in any such subject shall not be used in granting standing in both the First and the Second Years.

81. In the First and Second Years a candidate who has failed to receive credit in one of a group of optional subjects may with the approval of the Council present himself at the supplemental examinations in any other of the alternative subjects, except in the case of those subjects in which term work is an integral part of the subject. In such a substitution, however,

the candidate must, unless exempted by the Council, comply with all the conditions respecting term work, *i.e.*, there can be no transfer of term marks from the subject originally chosen to that substituted.

82. A successful candidate in a subject is graded as "A" or "B" or "C" according to the percentage obtained in the subject. For grade "A," a candidate must obtain at least seventy-five per cent., for grade "B," at least sixty per cent., and for grade "C," at least forty per cent. of the marks assigned to a subject.

### **Standing in the General Course.**

83. A candidate for the examination of the First Year in May, June or September will be granted standing, provided he passes in at least four of the six subjects of the year.

84. A candidate for the examination of the Second or the Third or the Fourth Year in May or September will be granted standing, provided he passes (1) in all the subjects of the year and in the one or the two subjects of the previous year in which he may have failed, or (2) in all but one of these subjects, or (3) in all but two of these subjects.

85. A candidate who has been granted standing in his year but has failed in two subjects must obtain credit in at least one of these subjects before he can register in the next higher year. This regulation will apply to all candidates to whom standing is granted at the Examinations in and subsequent to May, 1915.

86. A candidate who has failed to secure complete First Year standing may not enter upon the work of the Third Year, nor may a candidate who has failed to secure complete Second Year standing enter upon the work of the Fourth Year.

87. A candidate who obtains an average of seventy-five per cent. of all the marks assigned to the subjects of his annual examination will be awarded First Class Standing, provided that he has not failed in more than one subject either of his academic year or of the previous year.

88. A candidate who obtains under like conditions an average of sixty per cent. will be awarded Second Class Standing.

89. A candidate who obtains under like conditions an average of fifty per cent. will be awarded Pass Standing.

### **Honours in Special Subjects.**

90. A candidate who obtains at least seventy-five per cent. of the marks assigned to a special subject will be awarded First Class Honours.

91. A candidate who obtains at least sixty-six per cent. but less than seventy-five per cent. of the marks assigned to a special subject will be awarded Second Class Honours.

92. A candidate who obtains at least sixty per cent. but less than sixty-six per cent. of the marks assigned to a special subject will be awarded Third Class Honours.

93. A candidate who obtains at least fifty per cent. but less than sixty per cent. of the marks assigned to a special subject will be ranked as "Below the Line".

94. No candidate will be granted Honours or Below the Line in a special subject, where term work is taken into account, unless he obtain at least fifty per cent. of the marks at the May examination, as well as fifty per cent. of the aggregate of the term work and examination marks in that subject.

95. A candidate who fails to obtain fifty per cent. in a special subject, may be granted credit therein, as a subject of the General Course.

### **Degree with Honours.**

96. In order to obtain standing in a Special Course a candidate must have obtained at least fifty per cent. in each special subject of the course and credit for all, or all but one, of the subjects of the General Course attached thereto.

97. A candidate will be awarded First Class Honours in order of merit who has obtained an average of seventy-five per cent. of all the marks assigned to the special subjects of his course, and has also fulfilled the conditions of Section 96.

98. A candidate will be awarded Second Class Honours in order of merit who has obtained an average of at least sixty-six per cent. but less than seventy-five per cent. of all the marks assigned to the special subjects of his course, and has also fulfilled the conditions of Section 96.

99. A candidate will be awarded Third Class Honours who has obtained an average of at least sixty per cent. but less than sixty-six per cent. of all the marks assigned to the special subjects of his course, and has also fulfilled the conditions of Section 96.

100. A candidate will be ranked as "Below the Line" who has obtained less than sixty per cent. of all the marks assigned to the special subjects of his course, and has also fulfilled the conditions of Section 96.

101. A candidate in a Special Course, who has failed in two General Course subjects, will have his standing deferred both in the Special Course and in the individual subjects thereof, and will be debarred from registration and enrolment until he has passed in each of these subjects of the General Course.

102. A candidate in a Special Course will not be granted standing in his year if he fail in more than two subjects of his General Course.

103. A candidate of the First or Second Year who fails to secure standing in a Special Course may be transferred to the General Course on such conditions as the Council may impose. Such a candidate may accept the award or may repeat the year and again compete for Honours.

104. A candidate in a Special Course of the Third Year who fails to secure standing must repeat the Year, unless he be transferred to the General Course by the Council on the special report of the Board of Examiners.

105. A candidate in the Fourth Year who fails to obtain standing in his Special Course may on recommendation of the examiners be awarded a Pass degree. Such a candidate may accept the award or may repeat the year and again compete for Honours.

106. A candidate who has not been granted complete First Year standing, may not enter upon the work of the Third Year, nor a candidate who has not been granted complete Second Year standing upon the work of the Fourth Year.

### **Term Work.**

107. In the General Course, reports on the term work of every student proceeding to a degree will be made in all the subjects of each year.

108. The marks for term work in a subject of the General Course will be determined in the manner considered most suitable by the teaching staff in that subject.

109. In all subjects of the General Course, the ratio of term marks to examination marks will be as fifty to one hundred, except in the English of the First and Second Years where a candidate must obtain forty per cent. of the marks assigned to term work as well as of those assigned to the examination, respecting which see the second paragraph under the subject of English.

110. Term work in English and in the Sciences for students in the General Course is an integral part of each of these subjects. A candidate whose term work in any one of these subjects is reported as unsatisfactory must repeat it.

111. When a student fails to secure credit in a subject of the General Course because of a deficiency in term marks he must either (1) earn a new term mark under conditions to be determined by the staff in the subject, and repeat the examination or (2) make up the deficiency of term marks by securing a corresponding increase in his examination marks, except in the case of English and the Sciences of the General Course, respecting which see section 110.

112. In the Special Courses, reports in term work will be made wherever such work is specified as an integral part of the course.

113. In a Special Course, the ratio of term marks to examination marks in a subject will be determined by the staff in that subject.

### **Conditions of Entrance to the Various Years.**

114. Unless in exceptional cases and by special petition to the Council of the Faculty, a non-matriculated student who desires to enter a Special Course of the First Year must, in addition to evidence respecting other subjects, submit proof that his knowledge of Latin is at least equivalent to that required for Junior Matriculation.



115. Unless special permission is granted by the Council, every student entering a Special Course of the First Year must have secured honour standing at Junior Matriculation or at an equivalent examination in at least three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry. See Section 60 for the specific requirements for entrance to the several Special Courses.

116. Unless special permission is granted by the Council, a student of the General Course in the Second Year is not permitted to attempt a Special Course in addition to his General Course.

117. In order to proceed in a Special Course in the Second Year a candidate at the examination of the First Year (1) must have fulfilled the conditions of Section 96, (2) must, if his standing is deferred, have fulfilled the conditions of Section 101, and (3) in the case of non-matriculated students must have fulfilled the conditions of Section 33.

118. In order to proceed in a Special Course in the Third Year, a candidate at the examination of the Second Year (1) must have fulfilled the conditions of Section 96, (2) must have complete First Year standing, and (3) must, if his standing is deferred, have fulfilled the conditions of Section 101. A candidate who fails to comply with these conditions must either repeat the Second Year of his Special Course or, if transferred, proceed in the General Course of the Third Year, *i.e.* he cannot in the Third Year take both the General Course and a Special Course without the consent of the Council.

119. In order to proceed in a Special Course in the Fourth Year, a candidate at the examination of the Third Year, (1) must have fulfilled the conditions of Section 96, (2) must have complete Second Year standing, and (3) must, if his standing is deferred, have fulfilled the conditions of Section 101. A candidate who fails to comply with these conditions must repeat the Third Year of the Special Course unless transferred to the General Course by the Council on the special report of the Board of Examiners.

### **Repeating the Year.**

120. A student who has been granted standing in any year of the General Course may on conditions to be determined by the Council repeat that year in a Special Course, and on obtaining standing, may proceed therein.

121. A candidate in any course who for any cause is debarred from the higher year, may repeat the whole examination in the following May, but is not eligible for scholarships, medals, or prizes.

### **VIII. EXAMINATIONS.**

122. No candidate will be admitted to examination unless the Head of the College in which he is enrolled certifies that he has complied with all the requirements of that College affecting his admission to such examination.



123. A candidate will not be admitted to an examination unless he has paid all the fees due from him. A candidate who fails to pay his examination fees on or before the fifteenth of March—the last day for receiving fees prior to the May examination—must pay an additional fee of one dollar.

124. A candidate who fails to send his application for examination by the day appointed for receiving such applications must pay an additional fee of one dollar.

125. No candidate in a course involving practical work in a laboratory will be admitted to examination if the Professor under whom his work is carried on reports that he has neglected his laboratory work or signally failed in the practical examinations.

### **The May Examination.**

126. The May examination is held at the University and is open to candidates of all the Years in the General Course and in all the Special Courses.

127. Arrangements will be made, whenever possible, to allow a graduate, who is engaged in teaching in Ontario and who desires to receive credit in subjects not taken during his undergraduate course, to take such examinations in his own locality.

128. If the time-table permits, a candidate may present himself for examination in subjects in which he has failed previously to receive credit.

129. In the case of Fourth Year candidates, where there is a conflict in the time-table, a special supplemental examination may be arranged.

130. A candidate for examination is required to send an application, according to a printed form, to the Registrar not later than the 15th of March.

### **The June Examination.**

131. The June Examination, which is held at the University, and may be held at local centres as well, is exclusively for candidates for Senior Matriculation in the General Course.

132. A candidate for this examination is required to send an application according to a printed form to the Registrar not later than the 1st of May.

### **The September Supplemental Examination.**

133. The September Supplemental examination is held at the University and at the Columbian College, New Westminster, and is open (1) to candidates who failed in subjects of the General Course at a previous examination, and (2) to candidates in any year of the General Course, who were prevented by sickness, domestic affliction or other causes beyond their control, from attending the May Examination. The latter candidates must prove to the satisfaction of the Council the sufficiency of the alleged cause of absence.

134. If feasible this supplemental examination will be held at Winnipeg, Regina, Saskatoon, Edmonton and Calgary. The candidate for whom such an examination is held must meet the expenses incurred and should make early application for the privilege.

135. A candidate for this examination is required to send an application according to a printed form, to the Registrar not later than the 1st of August.

### **The January Supplemental Examination.**

136. The January examination is held at the University and is open to candidates who were awarded standing in the subjects of their course at the May or June examination and were prevented by sickness, domestic affliction or other causes beyond their control from attending the September examination. Such candidates must prove to the satisfaction of the Council the sufficiency of the alleged cause of absence.

137. A candidate for this examination is required to send an application, according to a printed form, to the Registrar not later than the 1st of December.

### **Local Senior Matriculation Examinations.**

138. Local Senior Matriculation examinations will be held in June at such centres as may from time to time be authorized by the Council of the Faculty.

139. Applications for the establishment of such an examination in June must be made through the Registrar not later than the 1st of May.

140. The presiding examiner or examiners at a local Senior Matriculation examination will be appointed by the Council of the Faculty, and should, if necessary, be competent to conduct an examination in French, German, Italian or Spanish Dictation.

141. The expenses in connection with such local Senior Matriculation examination must be met by the candidates at the centre or by the authorities of the school or college on whose application the examination is held.

142. The fee for the presiding examiner will be \$5 per diem during the whole examination period.

## **RESIDENCES.**

### **UNIVERSITY OF TORONTO.**

#### **Residence for Men.**

By the generosity of Mr. and Mrs. E. C. Whitney and other friends, the University can now offer to some hundred and fifty men the peculiar advantages of residential life and excellent accommodation within its own grounds. The Residence, opened in November, 1908, consists of three Houses situated on the north side of Hoskin Avenue, opening upon a

quadrangle, the fourth side of which is formed by Devonshire Place. They stand about two hundred yards to the north of University College and of the University Dining Hall and close to the University Gymnasium and Athletic Field. The buildings are known as the South, East, and North houses.

Each House contains twenty-four single rooms, one single suite, one double room and eleven suites, a suite comprising a study and two bedrooms. A large room in each building, with an open hearth and a library has been set aside as a common room. A lavatory with hot and cold shower baths is provided for every eight men. The buildings are heated by steam and lighted by electricity.

The University supplies the table, chairs, book-case, chiffonier, bed, mattress, pillows, linen and window shades for each room; it is prepared to furnish a drop-light for a nominal rental.

Each occupant is charged \$2.50 room-rent per week, payable to the Bursar four weeks in advance. The charge for each single suite is \$3.50 per week. These charges cover heat, light, house-service, house-laundry, and the use of the telephone. There is no separate dining hall connected with the Residence, but board may be obtained at the adjacent University Dining Hall for \$3.25 per week.

Applications for rooms must be made in writing to the Secretary of the Residence Committee (address the Registrar's Office) and must be accompanied by a deposit of \$5.00. This deposit will be returned if the application be not granted, but will be forfeited if a room is assigned to the applicant and not taken by him, unless notice of his refusal of the room be received by the Secretary in writing before September 8th. It will be returned in full at the end of the College year if the room key be given back and the room and furniture left in a satisfactory condition. The following principles govern the allotment of rooms: (i) No student, who as a result of the annual spring examinations, is not assured of being able to proceed to the subsequent year, will be admitted into the Residence; this regulation does not apply to certain students in the Faculty of Medicine. (ii) The rooms in each house will be distributed among the various Faculties and Years. (iii) Rooms will be reserved for members of the incoming First Year until September 18th. (iv) Applications will be considered in order of priority.

The University lays down three general rules, designed to prevent hazing, the use of intoxicants and gambling. The students in each House shall elect a House Committee, which is entrusted by the University with the making and enforcing of any other needed rules and with the maintenance of order. A member of the Faculty resides in each House to act as friend and adviser to the men in residence.

**UNIVERSITY COLLEGE.**

**Queen's Hall, Residence for Women, Nos. 4, 7, and 9 Queen's Park.**

Superintendent, Mrs. John Campbell.

Accommodation is provided for ninety-two students. Rates range from \$5.50 to \$6.00 per week, according to location. Payment must be in advance. Applications for rooms must be made in writing and a deposit fee of \$5.00 must accompany each application. This fee will be returned if the application is not granted or if it is withdrawn before the 15th of September. It will be returned in full at the end of the College course if the room is left in good condition and there are no breakages.

Applications from First Year students will be considered first, the other years in order of priority.

The students elect a house committee to assist the Superintendent in the maintenance of order and for the general welfare of the household.

**VICTORIA COLLEGE.**

**Burwash Hall, Residence for Men.**

The buildings comprise one hundred and sixteen bedroom-studies, and in each house there are a common room with a large fire-place on the ground floor and a Tutor's bedroom and sitting room on the second floor. About fifteen bedrooms have fire-places, and in one house there are two suites each consisting of a bedroom and a study.

The Hall is a perpendicular Gothic building capable of seating 250 persons at meals; used as a hall for lectures, it will seat about 800.

The majority of the rooms will be rented to students at \$2.50 per week. For some few rooms a charge of \$3.00 or \$3.50 a week will be made. The price of board will be \$3.25 a week.

Applications for rooms should be addressed to the Dean of Residence, Mr. C. V. Massey, B.A., Victoria College, Toronto.

**Residences for Women.**

In the year 1896 the late Mr. Hart A. Massey bequeathed to Victoria College a sum of money with which to erect a residence for the women students of the College. In the autumn of 1903 the building was ready for occupation.

Annesley Hall comprises, on the ground floor, a reception-room, library, common-room, offices, assembly-hall and dining-room. The first and second floors furnish students' rooms numbering thirty-nine single, and ten double rooms. On the second floor there is an infirmary with two single wards, a large ward, a bathroom, a nurse's room and a diet kitchen, all of which can be isolated from the rest of the building. The heating is by steam and the lighting by electricity.



A trained nurse is a regular member of the staff. Tennis and basketball courts, skating, hockey, a gymnasium and shower baths provide opportunity for physical development.

In 1906, a second Hall on the College grounds was secured, known as South Hall. with accommodation for eighteen students. Both Halls are under the same Committee of Management and under the same form of government. Self-government has been adopted and has thus far proved successful.

Applications for rooms must be accompanied by a deposit fee of \$10.00, which will be returned if the application is withdrawn before September first. Fees for the year range from \$175 to \$225, according to the size and location of the room, and are payable, half on the first of October, and half on the first of February. Students may use the laundry for an extra fee of one dollar a year.

Applications for rooms as well as all enquiries in regard to rules and regulations should be addressed to Miss M. E. T. Addison, B.A., Dean of Residence, Annesley Hall, Queen's Park, Toronto.

### **TRINITY COLLEGE.**

Trinity College provides residences for both men and women students. The men reside in Trinity College and Trinity House, in which together there is accommodation for about 100 students. The women reside in St. Hilda's College, St. Hilda's Lodge, and 193 Crawford St., in which together accommodation for about fifty or fifty-five is provided.

#### **Residence for Men.**

Excellent accommodation for men is to be found in the two residences set apart for their use. Several members of the staff are resident in the buildings. The students' living rooms are so arranged that two students may room together, or a student may have a room to himself, as may be preferred. Many of the rooms are planned so that the sleeping apartment may be curtained off from the larger room, with which it is connected by an archway, leaving a most comfortable study which, being freed from bedroom furniture, may be made specially attractive. This arrangement is advantageous also from the point of view of health. The room rent varies considerably according to the size and location of the room selected. The fees for room and board for the Academic Year run from \$165 upwards for the Arts Year, and less for the Divinity year. There is a students' common room, gymnasium—which is used also for basket-ball and boxing—a hockey rink, tennis courts, a large field for sports, and ample grounds surrounding the College buildings. College affairs affecting student life are arranged by the students themselves in the "College Meeting", which is formally organized and embraces all the students of the College under the chairmanship of the Senior Student, known as "Head of College".



Applications for rooms in College are to be made on a printed form provided for this purpose, and are received at any time after the 1st January for the succeeding Michaelmas Term, being subject to withdrawal on written notice up to the 15th September. The rooms, being furnished partly by the College and partly by the occupants, may be fitted up to suit the taste of the individual student. Further information, with blank forms of application, will be supplied on request being made to "The Provost", Trinity College, Toronto.

### **Residence for Women.**

Exceedingly comfortable accommodation is provided for the Women Students of Trinity in St. Hilda's College and the adjoining buildings, which are situated in the grounds of Trinity College, less than four minutes' walk from the lecture rooms. The buildings are well planned, with ample common rooms and very attractive living rooms for the students. The young ladies have their own tennis courts, and provision is made for basketball in the Gymnasium of Trinity College. The charge for board and lodging is about \$190 net for the Academic Year. The rooms are furnished and an entrance fee of \$12 is charged in the first year to cover expenses of bedding and furniture. The several houses are in charge of experienced ladies. Full information will be supplied on application to "The Lady Principal, St. Hilda's College, Toronto".

### **ST. MICHAEL'S COLLEGE.**

For Catholic students St. Michael's is now prepared to offer all the advantages peculiar to a Catholic College.

### **Residence for Men.**

There is accommodation for the men at St. Michael's College. Parents are most careful of the dangers and temptations to which students, away from home for the first time, are subjected. This is a point that St. Michael's chiefly considers, and she is in a position to almost guarantee that the student will be as safe in every way as if he were in his own home, in addition to receiving all the advantages of the University.

The residents are subjected to a reasonable rule with a view to careful supervision, and a solid moral and religious training. Constant and intimate intercourse between staff and student is a feature.

The health and development of body and mind is promoted by regulated hours of study and recreation. Opportunity is given for all kinds of athletic exercise. For terms and application, address "The President".

### **Residence for Women.**

For women students, St. Joseph's Convent, St. Alban's Street, and Loretto Abbey, Wellington Street, are providing residences to meet in every way the wishes of all. Address "The Superior".

**FEES.**

All University fees, as also the fees of students enrolled in University College, are payable to the Bursar at his office in the Main University Building, between the hours of ten and one o'clock, except on Saturday.

The College fees of students enrolled in Victoria College are payable to the Fees Clerk of that College.

The College fees of students enrolled in Trinity College or St. Michael's College are payable to the Bursar of the College.

**I. UNIVERSITY FEES.**

Matriculated and non-matriculated students, proceeding to the degree of Bachelor of Arts and enrolled in University College, or Victoria College, or Trinity College, or St. Michael's College, may attend the lectures of University professors and lecturers in the Faculty of Arts without payment of fees, except those imposed for laboratory supplies, but such students must register in the University.

**Ad Eundem Statum Fees.**

For admission, by certificate, to Second Year.....	\$15.00
For admission ad eundem statum.....	10.00

**Library Fees.**

The annual fee.....	\$2.00
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Every matriculated and non-matriculated student in attendance, proceeding to the degree of Bachelor of Arts, is required to pay at the time of the entry of his name with the Registrar the annual library fee.

No occasional or graduate student shall be admitted to the library save upon the payment of the annual fee.

**Council of the Undergraduates Fee.**

The annual fee.....	\$1.00
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Every male student in attendance, proceeding to the degree of Bachelor of Arts, is required to pay to the Bursar at the time of the entry of his name with the Registrar the annual fee of one dollar for the maintenance of the Council of the Undergraduates.

**Charges for Laboratory Supplies.**

Charges for supplies shall include laboratory materials and instruments used by or for the student, and ordinary wear and tear of instruments, but not charges for waste, neglect and breakage, which are to be met out of a deposit to be fixed by the Professor.

The annual supply charges for a student shall be according to the following table in which for convenient reference, the college fees for each year of the various courses are also included, reference being made to the annual fee if paid in October, and not by instalments, for the details of which see pages 117-118.

COURSES.

	SENIOR MATIC.		FIRST YEAR.		SECOND YEAR.		THIRD YEAR.		FOURTH YEAR.	
	COLLEGE REGISTRATION.	LABORATORY SUPPLIES.	COLLEGE REGISTRATION.	LABORATORY SUPPLIES.	COLLEGE REGISTRATION.	LABORATORY SUPPLIES.	COLLEGE REGISTRATION.	LABORATORY SUPPLIES.	COLLEGE REGISTRATION.	LABORATORY SUPPLIES.
<sup>1</sup> General Course .....	45	..	40	..	40	..	40	5	40	5
General Course (Household Science).....	45	..	40	..	40	..	40	10	40	10
<sup>2</sup> Philosophy .....	45	..	40	..	40	..	40	3	40	3
Commerce and Finance.....	45	..	40	..	40	..	40	3	40	3
Mathematics and Physics .....	45	3	40	3	40	5	40	8	40	..
Physics .....	45	5	40	5	40	8	40	8	35	10
Astronomy and Physics .....	45	3	40	3	40	5	40	8	35	10
Natural and Physical Sciences.....	45	5	40	5	..	..	..	..	..	..
Biology .....	45	5	40	5	40	9	35	12	30	22
<sup>3</sup> Biological and Physical Sciences.....	45	5	40	5	40	6	35	10	30	20
<sup>3</sup> Physiological and Biochemical Sciences .....	45	5	40	5	40	6	35	10	30	20
Chemistry and Mineralogy I.....	45	5	40	5	40	5	35	13	35	10
<sup>4</sup> Chemistry and Mineralogy II .....	45	5	40	5	40	5	40	4	40	3
<sup>4</sup> Geology and Mineralogy .....	45	5	40	5	40	9	40	3	40	3
Household Science .....	45	5	40	5	40	11	35	15	30	20
Physiology and Household Science .....	45	5	40	5	40	11	35	15	30	20
<sup>5</sup> Any other Course.....	45	..	40	..	40	..	40	..	40	..

<sup>1</sup>The Laboratory Supply fee in the Third and Fourth Years is required only from those students who are taking the Household Science option.

<sup>2</sup>The Laboratory Supply fee is not required from students of St. Michael's College.

<sup>3</sup>The fees for the Faculty of Medicine are not included.

<sup>4</sup>The fees for Drawing and Assaying are not included.

<sup>5</sup>At present these courses are Classics, Greek and Hebrew, Oriental Languages, Modern Languages, English and History, Modern History, Political Science.

**Examination Fees.**

Students proceeding regularly to the B.A. degree.

For the June Senior Matriculation or January Supplemental Examination.....\$15.00

For each examination other than June and January..... 10.00

For each Supplemental examination..... 10.00

For examination for M.A..... 10.00

Teachers' Course, Occasional and Summer Session Students.

For examination in one subject of any year, each..... 5.00

Maximum fee..... 10.00

A candidate who fails to pay his University fees on or before the fifteenth of March—the last day for receiving fees prior to the May examination—must pay an additional fee of one dollar. \$1

A candidate who fails to send his application for examination by the day appointed for the receipt of such applications must pay an additional fee of one dollar.

**Degree Fees.**

For the degree of B.A.....\$10.00

For the degree of M.A..... 10.00

For admission ad eundem gradum (B.A. or M.A.)..... 20.00

For the degree of Ph.D..... 50.00

**Fees for Occasional Students in Dentistry.**

Course of instruction in Physics.....\$ 5.00

Laboratory supplies in Physics..... 3.00

**Miscellaneous Fees.**

For registration for Ph.D. course per annum.....\$ 5.00

For tuition for Ph.D. per annum..... 20.00

For certificate of honour..... 1.00

A candidate, registered in course for the degree of Doctor of Philosophy and holding either a permanent or an annual appointment as a member of the staff of the University or of one of its Colleges, is not required to pay the annual tuition fee.

The fee for admission ad eundem statum, or for dispensation from attendance upon lectures, or for certificates of honour, must be paid at the time of application.

A candidate who fails to pay his University fees on or before the fifteenth of March—the last day for receiving fees prior to the May examination—must pay an additional fee of one dollar.

## II. COLLEGE FEES.

A graduate in Arts who, during his undergraduate course, was enrolled in either University College, or Victoria College, or Trinity College, or St. Michael's College, may attend lectures free in the college in which he was so enrolled.

Every matriculated and non-matriculated student proceeding to the degree of Bachelor of Arts shall, on each year's enrolment in University College, or Victoria College, or Trinity College, or St. Michael's College, pay an enrolment fee according to the following table, which fee shall include all instruction for which fees are chargeable except laboratory supply charges and library fees:—

### Table of Fees.

#### First Year:—

Matriculated Students—Any course, if paid in full in  
October.....\$40.00

#### By instalments:—

First instalment, if paid in October..... 20.00  
Second instalment, if paid in January..... 21.00

Non-matriculated Students—Any course, if paid in full in  
October..... 45.00

#### By instalments:—

First instalment, if paid in October..... 23.00  
Second instalment, if paid in January..... 23.00

#### Second Year:—

Matriculated Students—Any course, if paid in full in  
October..... 40.00

#### By instalments:—

First instalment, if paid in October..... 20.00  
Second instalment, if paid in January..... 21.00

Non-matriculated Students—Any course, if paid in full in  
October..... 45.00

#### By instalments:—

First instalment, if paid in October..... 23.00  
Second instalment, if paid in January..... 23.00

#### Third Year:—

Chemistry and Mineralogy, Div. I, *or* Biological and  
Physical Sciences, *or* Physiological and Biochemical  
Sciences, *or* Biology, *or* Household Science, *or* Physiology  
and Household Science.

If paid in full in October..... 35.00



## By instalments:—

First instalment, if paid in October..... 18.00

Second instalment, if paid in January..... 18.00

Any other course, if paid in full in October..... 40.00

## By instalments:—

First instalment, if paid in October..... 20.00

Second instalment, if paid in January..... 21.00

## Fourth Year:—

Chemistry and Mineralogy, Div. I, *or* Physics, *or* Astronomy and Physics.

If paid in full in October..... 35.00

## By instalments:—

First instalment, if paid in October..... 18.00

Second instalment, if paid in January..... 18.00

Biological and Physical Sciences, *or* Physiological and Biochemical Sciences, *or* Biology, *or* Household Science, *or* Physiology and Household Science.

If paid in full in October..... 30.00

## By instalments:—

First instalment, if paid in October..... 15.00

Second instalment, if paid in January..... 16.00

Any other course, if paid in full in October..... 40.00

## By instalments:—

First instalment, if paid in October..... 20.00

Second instalment, if paid in January..... 21.00

Arts and Forestry—First, second, third, fourth, fifth, and sixth years. Annual fee, including tuition, library, laboratory supply, and one annual examination. The College fee in each of the first, second, and third years is \$30:—

If paid in full in October..... 70.00

## By instalments:—

First instalment, if paid in October..... 35.00

Second instalment, if paid in January..... 36.00

All the above fees are payable in advance, and if not paid during the month of October (or, in the case of students attending in Easter Term only, during the month of January), an additional fee of \$1 a month will be imposed until the whole amount is paid.

The annual enrolment fee of a matriculated student taking under the regulations more than one honour course shall be \$40 only.

The enrolment fee of a matriculated student attending lectures for one term shall be \$20.

The enrolment fee for students receiving dispensation from attendance upon lectures in University College, or Victoria College, or Trinity College, or St. Michael's College, shall be \$5 for each term, in addition to the University fee of \$5. The payment of these fees entitles the student to supervision of "term work" prescribed in connection with his course.

### III. FEES FOR OCCASIONAL STUDENTS, TEACHERS' COURSE AND SUMMER SESSION.

"A course in laboratory work" means the continuous course of instruction in laboratory or practical work offered to students in any one year in any of the subjects in which laboratory work is or may be prescribed.

"A course of lectures" means the continuous course of instruction offered in any one year in any of the subjects in which instruction is or may be given.

Laboratory fees are divided into (a) Fees for practical instruction in the laboratory, (b) Charges for supplies, which are the same as for students proceeding to the degree. (See page 114).

The payment of fees shall not entitle any occasional student to be admitted to the laboratory work of a later year without having taken that of the earlier year or years, unless this requirement is dispensed with by the Council of the Faculty on the recommendation of the Professor.

The annual fee for an occasional student attending a course, or partial course, of lectures shall be as follows:—

#### \* Tuition Fees.

	For the Session	For the Term.
For a course in any one subject.....	\$10.00	\$5.00
For a course in more than one subject, each subject.....	9.00	5.00
Maximum Fee.....	45.00	23.00

#### Examination Fees.

For examination in one subject of any year, each.....	\$5.00
Maximum examination fee.....	10.00

All instruction fees are payable strictly in advance.

## **PRIZES, MEDALS, SCHOLARSHIPS AND FELLOWSHIPS.**

No candidate will be permitted to hold more than one scholarship, but any one who would, but for this provision, have been entitled to a second scholarship, will have his name published in the lists.

All undergraduate scholars must sign a declaration of intention to proceed to a degree in Arts in this University, and must attend lectures in one of the Colleges for the academic year immediately following such examination. The Senate, however, on the recommendation of the Faculty, may, upon satisfactory reasons being shown, permit such scholar to postpone attendance upon lectures for a year. If at the end of the year a further postponement is necessary, special application must again be made. In every such case the payment of the scholarship will likewise be postponed. The scholarships are paid in three instalments—on the fifteenth of November, the fifteenth of January and the fifteenth of March; and each scholar is required to send to the Registrar a certificate of attendance upon lectures at least three days before the date of each payment.

No scholarship or medal will be awarded to any candidate who has been placed lower than the first class in the department to which the scholarship or medal is attached.

When the letter "U" is prefixed, the award is made by the Senate of the University on the recommendation of the Council of the Faculty as the result of competition open to the students of all the Colleges. In all other cases the letter indicates the governing body by which the award is made:—the Council of University College by the letter "C", the Senate of Victoria College by the letter "V", and the Corporation of Trinity College by the letter "T".

With the exception of the Glashan Medal in Mathematics, all honours awarded by the Senate on the recommendation of the Faculty are open to the students of all the Colleges.

The competition for a College scholarship, medal or prize is confined to the students registered in that College and shall be subject to such regulations as the College may from time to time determine.

**PRIZES.**

**First Year.**

ENGLISH.

- V. The Class of 1902 Prize, the gift of Professor C. E. Auger, B.A., of the value of \$10 to the student ranking highest in English of the General Course.

**Second Year.**

ENGLISH.

- C. The Alumnae Prize, the gift of the Toronto Alumnae of the value of \$10 in books, to the student ranking highest in English Composition.
- V. The Webster Prize, the gift of the late J. G. Hodgins, Esq., M.A., LL.D., I.S.O., of the value of \$10, to the student ranking highest in English of the General Course.

HEBREW.

- V. The Robert Johnston Prize, the gift of the Rev. Professor J. F. McLaughlin, B.A., B.D., of the value of \$15, to the student ranking highest in Hebrew of the General Course.

**First and Second Years.**

ENGLISH.

- V. Two prizes, of the value of \$10 each, will be awarded for the two best essays on a subject to be assigned by the Staff in the Department of English. Neither of these prizes will be granted twice to the same student.

**Third Year.**

- V. The Hodgins Prize, the gift of the late J. G. Hodgins, M.A., LL.D., I.S.O., of the value of \$12, to the student ranking highest in English of the General Course.

ENGLISH BIBLE.

- V. The Massey Bursaries, established by the late Hart A. Massey, Esq., one of \$25 and one of \$15, to the students ranking first and second at the examination in the English Bible.

**Fourth Year.**

CANADIAN CONSTITUTIONAL HISTORY.

- V. The Robertson Prize, the gift of W. J. Robertson, Esq., B.A., LL.B., of the value of \$10, to the student ranking highest in Canadian Constitutional History.

CLASSICS.

- T. The Prince of Wales' Prize, \$18, for the highest first class honours in Classics.

## T. MATHEMATICS.

The Prince of Wales' Prize, \$18, for the highest first class honours in Mathematics.

## NATURAL SCIENCE.

- T. A prize of \$15 for the highest first class honours in any graduating department of the Natural and Physical Sciences.

## MODERN LANGUAGES.

- T. A prize of \$15 for the highest first class honours in Modern Languages.  
ENGLISH AND HISTORY.

- T. A prize of \$15 for the highest first class honours in English and History with either option.

## MODERN HISTORY.

- T. A Prize of \$15 for the highest first class honours in Modern History.  
PHILOSOPHY.

- T. A Prize of \$15 for the highest first class honours in Philosophy.

## POLITICAL SCIENCE.

- T. A Prize of \$15 for the highest first class honours in Political Science.

## GENERAL COURSE.

- T. A Prize of \$15 for the highest ranking in first class Standing in the General Course.

**Third and Fourth Years.**

## BIBLICAL GREEK.

- V. The Wallbridge Prize, the gift of the late A. F. Wallbridge, Esq., of the value of \$10, to the student ranking first in Biblical Greek.

## NEW TESTAMENT INTRODUCTION.

- V. The Robert Wallace Prize, the gift of the Rev. Professor F. H. Wallace, M.A., D.D., of the value of \$10, to the student ranking first in New Testament Introduction.

**All the Years.**

## FRENCH COMPOSITION.

- C. The Squair French Prose Prize, of the annual value of \$10, endowed by Professor Squair, is open for competition among students in attendance upon lectures in University College. The award shall be made annually by the Council of University College on the recommendation of the teaching staff in French. The books awarded are to be chosen by the winner after consultation with the staff in French.

## NEW TESTAMENT HISTORY.

- V. The Ryerson Prize, the gift of the late J. G. Hodgins, Esq., M.A., LL.D., I.S.O., of the value of \$12, to the student ranking first in New Testament History.

## ORATORY.



V. The Michael Fawcett Prize of \$40 is awarded annually for "the best extempore oration" on a subject to be assigned at the commencement of each college year by the trustees of the fund. This prize is open to all candidates on probation for the ministry of the Methodist Church.  
GREEK.

T. A Prize of \$20 for Greek Prose.  
LATIN.

T. A Prize of \$20 for Latin Verse.

T. A Prize of \$20 for Latin Essay.  
GREEK OR LATIN.

T. A Prize of \$20 for an essay in English on some subject of classical study.  
ENGLISH.

T. A Prize of \$20 for an English Essay.

T. A Prize of \$20 for an English Poem.

The subjects of these Trinity College Prizes will be posted on the College notice board.

## MEDALS.

### Second Year.

#### THE GENERAL COURSE.

U. The Governor-General's Silver Medal will be awarded to that candidate who, taking not less than seventy-five per cent. in this examination, takes also the highest aggregate of marks when the results of the First and Second Year examinations in this course are added together, such examinations having been taken in two consecutive calendar years.

The discretion of the examiners, as in the examination for the Governor-General's Gold Medal, shall apply also to this examination.

#### COMMERCE AND FINANCE.

U. The P. W. Ellis Bronze Medal, awarded to the student who stands highest in first class honours in this course.

### Fourth Year.

#### GENERAL PROFICIENCY.

U. The Governor-General's Gold Medal is intended for the encouragement of the study of English in those departments in which English is not an integral portion of the work of the third and fourth years and will be awarded to that candidate who, taking not less than sixty-six per cent. in English (as defined below), and not less than seventy-five per cent. in some one of the following honour departments:—  
(a) Classics, (b) Greek and Hebrew, (c) Oriental Languages, (d) Modern History, (e) Political Science, (f) Philosophy, (g) Mathematics, (h) Physics, (i) Biological and Physical Sciences, (j) Biology, (k) Chemistry and Mineralogy, (l) Geology and Mineralogy,—shall also take the best aggregate mark in the two subjects.

English shall be understood to mean only the papers based on English courses 4a and 4b. The essays prescribed for Honour students are not taken into account in this award.

In order to obviate any unfairness arising from a different system of marking in different departments, the principle shall always be adopted of raising the marks of the best candidate in the first class of each department to the maximum, and those of the others in proportion, unless the examiners of any department report that the marks of the best candidate in their department are not of sufficient merit to be so raised.

The Registrar shall publish not only the name of the successful candidate, but also the names of all candidates who, by satisfying the above conditions, are eligible for the award.

- V. The Prince of Wales' Gold Medal, endowed by His late Majesty King Edward VII, will be awarded to the student who ranks first in first class Standing in the General Course.
- V. The Prince of Wales' Silver Medal, endowed by His late Majesty King Edward VII, will be awarded to the student who ranks second in first class Standing in the General Course.
- V. The Governor-General's Silver Medal will be awarded to the candidate standing highest in Honour Modern English of the Fourth Year examination, provided he has taken First or Second Class in his Special Honour Department or First Class in the General Course at graduation, First Class Honour Men having the preference. In case such a candidate has already received the Governor-General's Gold Medal, the next in rank shall be eligible.
- T. The Governor-General's Silver Medal will be awarded to the student taking the best degree, provided that first class Standing shall have been obtained in a Special or in the General Course.

#### CLASSICS.

- C. The McCaul Medal (Gold), established in 1886 by the late W. H. C. Kerr, M.A., Gold Medallist in Classics of 1859, in memory of the Rev. John McCaul, LL.D., First Professor of Classics, and First President of University College. It was presented by Mr. Kerr from 1886 up to his death, and from 1891 to 1894, after his death, by his widow. Since then the donors have been in 1895 John Hoskin, K.C., LL.D., Chairman of the Board of Trustees 1906-1910; in 1896 Nicol Kingsmill, M.A., K.C., Classical Medallist of 1856; in 1897, A. M. Crombie, Esq., of Montreal, in memory of his brothers Ernestus Crombie, M.A., Gold Medallist in Classics of 1854, and Marcellus Crombie, M.A., LL.B., Gold Medallist in Classics of 1857; in 1898 and 1899 William Dale, M.A., Gold Medallist in Classics of 1871; in 1900 Professor Fletcher, Gold Medallist in Classics of 1872, and Professor

Hutton; in 1901 Adam Carruthers, M.A., Gold Medallist in Classics of 1880; in 1902 W. S. Milner, M.A., Gold Medallist in Classics of 1881; in 1903 G. W. Johnston, Ph.D.; in 1904-1914 the Hon. Sir J. M. Gibson, M.A., LL.D., by whom it will be presented in 1915.

The winners of the McCaul Medal have been as follows:—

1886, W. P. Mustard, Ph.D.; 1887, E. O. Sliter; 1888, H. J. Crawford; 1889, H. J. Cody, D.D., LL.D.; 1890, James Colling; 1891, C. A. Stuart; 1892, F. W. Shipley, Ph.D.; 1893, F. B. R. Hellemis, Ph.D.; 1894, J. H. Brown (*ob.*); 1895, W. T. F. Tamblyn, Ph.D.; 1896, Donald McFayden; 1897, R. O. Joliffe; 1898, Miss Florence E. Kirkwood; 1899, W. H. Alexander, Ph.D.; 1900, Miss Landon Wright; 1901, E. J. Kylie; 1902, E. H. Oliver, Ph.D.; 1903, A. G. Brown; 1904, W. H. Tackaberry (*ob.*); 1905, S. A. Cudmore; 1906, R. W. Hart; 1907, W. A. Rae; 1908, Miss C. M. Knight; 1909, A. G. Hooper; 1910, no award; 1911, C. N. Cochrane; 1912, C. H. Carruthers; 1913, H. V. Wrong.

V. The Edward Wilson Gold Medal, founded by the late Bishop Edward Wilson in memory of his son Edward Wilson.

V. The S. H. Janes Silver Medal.

#### MODERN LANGUAGES.

C. The Governor-General's Silver Medal.

V. The J. J. MacLaren Gold Medal.

V. The S. H. Janes Silver Medal.

#### POLITICAL SCIENCE.

U. The P. W. Ellis Gold Medal, awarded to the student who stands first in first class honours. If more than one candidate ranks for the first place in first-class honours in the Department, the award shall be made to that one of these candidates who ranks highest in the subject of Economics.

#### PHILOSOPHY.

V. The E. J. Sanford Gold Medal.

V. The S. H. Janes Silver Medal.

#### MATHEMATICS.

U. The Glashan Gold Medal, the gift of J. C. Glashan, LL.D., awarded to the University College candidate who stands highest in first class honours.

V. The S. H. Janes Silver Medal in Mathematics.

#### PHYSICS.

U. The James Loudon Gold Medal, the gift of the local Committee for the Toronto Meeting of the American Association for the Advancement of Science. Awarded to the candidate ranking highest in first class honours.

## ASTRONOMY AND PHYSICS.

- U. The Royal Astronomical Society of Canada Gold Medal, awarded to the candidate obtaining the first place in first class honours.

## NATURAL SCIENCE.

- V. The G. A. Cox Gold Medal.
- V. The S. H. Janes Silver Medal.

## HOUSEHOLD SCIENCE.

- U. The Mrs. Hart A. Massey Gold Medal, awarded to the candidate ranking highest in first class honours.

**All the Years.**

## POLITICAL SCIENCE.

- U. The P. W. Ellis Silver Medal, awarded on the recommendation of the Staff in Political Science to the student in the Commercial Course or Department of Political Science, for the best essay undertaken as summer research work.

## NATURAL SCIENCE.

- U. The Cawthorne Medal, the gift of F. T. Shutt, M.A., awarded on the recommendation of the Natural Science Association.

**SCHOLARSHIPS.****First Year.**

## CLASSICS.

- C. The Moss Scholarship, of the value of \$60, founded by subscription in honour of the late Hon. Chief Justice Thomas Moss.
- V. The Robertson Scholarship, of the value of \$50, the gift of Professor J. C. Robertson, M.A.

SEMITIC LANGUAGES *or* GREEK AND HEBREW.

- T. The Pettit Scholarship, of the value of \$40, with free tuition for three years, provided the scholar obtains first class honours at subsequent examinations.

## MODERN LANGUAGES.

- C. The Edward Blake Scholarship, of the value of \$60, the gift of the late Hon. Edward Blake, formerly Chancellor of the University.

## POLITICAL SCIENCE.

- U. The Bankers' Scholarship, of the value of \$70, the gift of the Bank of Toronto, the Canadian Bank of Commerce, the Dominion, Imperial, Standard, and Traders Banks, and the Union Bank of Lower

Canada. Only such candidates are eligible as have passed the examination of the First Year and as may undertake to proceed to graduation in the Department of Political Science. A special examination on some special text-book of history or finance will be held at the time of the Supplemental examination in September. This scholarship is not tenable with any other.

The prescribed text-books are as follows:—

1914: Macgregor, *The Evolution of Industry* (Home University Library).

1915. Carver, *The Distribution of Wealth*.

#### MATHEMATICS AND PHYSICS.

- U. The Alexander T. Fulton Scholarship, of the value of \$60, the gift of the late Alexander T. Fulton, Esq.

#### NATURAL AND PHYSICAL SCIENCES.

- U. The First Alexander T. Fulton Scholarship of the value of \$50, the gift of the late Alexander T. Fulton, Esq.
- U. The Second Alexander T. Fulton Scholarship, of the value of \$40, the gift of the late Alexander T. Fulton, Esq.
- U. The Third Alexander T. Fulton Scholarship of the value of \$30, the gift of the late Alexander T. Fulton, Esq.

### Second Year.

#### CLASSICS.

- C. The William Mulock Scholarship, of the value of \$60, the gift of the Hon. Sir William Mulock, M.A., LL.D., for many years Vice-Chancellor of the University.
- V. A Scholarship of the value of \$50.
- T. The Hart-Moorhouse, of the value of \$40, the gift of Alumni, commemorating Messrs. W. Hart and A. C. Moorhouse, who were drowned in their graduating year, 1906, to the student ranking highest in first class honours in Classics, or, failing these, in English and History with the classical option.

#### MODERN LANGUAGES.

- C. The George Brown Scholarship, of the value of \$60, founded in honour of the late Hon. George Brown.

#### ORIENTAL LANGUAGES.

- C. The Knox College Scholarship, in Oriental Literature, of the value of \$45, is offered by the Senate of Knox College, to be competed for by students who are in actual attendance in University College, and intend to enter the theological classes of Knox College.
- V. A Scholarship of \$50, the gift of Professor J. F. McLaughlin, B.A., B.D., and others.



## PHILOSOPHY.

- U. The John Macdonald Scholarship, of the value of \$50, the gift of the late Hon. John Macdonald.
- T. A Scholarship in Mental and Moral Philosophy, which entitles the holder to free tuition in the Third Year and in the Fourth Year, if he obtains first class honours in the Third Year.

## POLITICAL SCIENCE.

- U. The First Alexander Mackenzie Scholarship, of the value of \$75, the gift of the friends of the late Hon. Alexander Mackenzie.
- U. The Second Alexander Mackenzie Scholarship, of the value of \$50, the gift of the friends of the late Hon. Alexander Mackenzie.
- T. A Scholarship in Political Science which entitles the holder to free tuition in the Third Year and in the Fourth Year, if he obtains first class honours in his Third Year.

## MATHEMATICS AND PHYSICS.

- U. The William Mulock Scholarship, of the value of \$60, the gift of the Hon. Sir William Mulock, M.A., LL.D., ex-Vice-Chancellor of the University.

## PHYSICS.

- U. The Edward Blake Scholarship, of the value of \$45, the gift of the late Hon. Edward Blake, M.A., LL.D., ex-Chancellor of the University.

## BIOLOGICAL AND PHYSICAL SCIENCES.

- U. The Edward Blake Scholarship, of the value of \$45, the gift of the late Hon. Edward Blake, M.A., LL.D., ex-Chancellor of the University.

## (1) BIOLOGY AND (2) GEOLOGY AND MINERALOGY.

- U. The Edward Blake Scholarship, of the value of \$45, the gift of the late Hon. Edward Blake, M.A., LL.D., ex-Chancellor of the University.

## CHEMISTRY AND MINERALOGY.

- U. The Edward Blake Scholarship, of the value of \$45, the gift of the late Hon. Edward Blake, M.A., LL.D., ex-Chancellor of the University.

In case one or more of the four foregoing scholarships is not awarded, the amount rendered available will be divided among the other scholars, but no award shall exceed \$60.

**Third Year.**

## CLASSICS.

- C. The Moss Scholarship, of the value of \$60, founded by subscription in honour of the late Hon. Chief Justice Thomas Moss.
- V. The Bell Scholarship, of the value of \$60, the gift of Professor A. J. Bell, Ph.D.

ORIENTAL LANGUAGES.

- C. The Knox College Scholarship, of the value of \$60, is offered by the Senate of Knox College, to be competed for by students who are in actual attendance in University College, and intend to enter the theological classes of Knox College.

MODERN LANGUAGES.

- C. The Julius Rossin Scholarship, of the value of \$60, the gift of the late Julius Rossin, M.A.

PHILOSOPHY.

- C. The John Macdonald Scholarship of the value of \$50, the gift of the late Hon. John Macdonald.
- V. The George John Blewett Scholarship, of the value of \$50, the gift of Mrs. G. J. Blewett in memory of the late Professor Blewett.
- U. The Kirschmann Scholarship, of the value of \$25, the gift of Dr. A. Kirschmann. This scholarship will be awarded at the end of the Third Year to the student who ranks first in the subject of Light with first or second class honours in the Department of Philosophy of the Second Year, and obtains first class honour standing in Experimental Psychology of the Third Year. In case the winner of the John Macdonald Scholarship in Philosophy of the Third Year is eligible for the Kirschmann Scholarship the latter will be awarded to the next eligible candidate.

POLITICAL SCIENCE.

- U. The First Alexander Mackenzie Scholarship, of the value of \$75, the gift of the friends of the late Hon. Alexander Mackenzie.
- U. The Second Alexander Mackenzie Scholarship, of the value of \$50, the gift of the friends of the late Hon. Alexander Mackenzie.

MATHEMATICS AND PHYSICS.

- U. A Scholarship of the value of \$60, the gift of the Local Committee for the Toronto meeting of the American Association for the Advancement of Science. In awarding this scholarship, the theoretical and practical work in the department will be estimated in the proportion of three to one.

PHYSICS.

- U. A scholarship of the value of \$55, the gift of the Local Committee for the Toronto meeting of the American Association for the Advancement of Science.

BIOLOGICAL AND PHYSICAL SCIENCES.

- U. The Daniel Wilson Scholarship of the value of \$20, the gift of the late William Christie, Esq.

## BIOLOGY.

- U. The Daniel Wilson Scholarship of the value of \$30, the gift of the late William Christie, Esq.

In case either of the two foregoing scholarships is not awarded, the amount rendered available will be given to the scholar in the other department.

## CHEMISTRY AND MINERALOGY.

- U. The Daniel Wilson Scholarship, of the value of \$30, the gift of the late William Christie, Esq.

## GEOLOGY AND MINERALOGY.

- U. The Daniel Wilson Scholarship, of the value of \$30, the gift of the late William Christie, Esq.

In case either of the two foregoing scholarships is not awarded, the amount rendered available will be given to the scholar in the other department.

**Fourth Year.**

## HONOUR COURSE.

- T. The Jubilee Scholarship of the value of \$120, tenable for two years, was founded by the Society for the Propagation of the Gospel, and is awarded yearly to the most deserving Bachelor of the Year who has obtained at least second class honours. On admission to the scholarship a declaration must be signed by the holder that it is his purpose to complete the Divinity Course in Trinity College and to present himself as a candidate for Holy Orders. Should he fail to do so, he will be held bound to refund to the College such proceeds of the scholarship as he shall have received.

**All the Years.**

- V. An endowment of \$8,000, provided by a bequest of the late W. E. H. Massey, Esq., will furnish a number of additional scholarships which are awarded under the terms of the will in aid of deserving students.
- T. The late Ven. Archdeacon Nelles, of Brantford, left \$2,000 to Trinity College to be used for the assistance of students in Arts or Theology during their course in the College. Loans will be made from this fund, to be repaid by the students after the completion of their College course. There are also other funds from which similar loans will be made.
- V. The Class of 1893 Bursary, of the value of \$25, to be awarded at the discretion of the Faculty of Victoria College.
- V. The Rowell Scholarships, one of \$30 and one of \$20, the gift of Mr. N. W. Rowell, K.C., M.P.P., and Mrs. Rowell, open to all students of Victoria College, will be awarded annually to the students ranking first and second in Church History.

**"Industrial Canada" Prizes.**

U. "Industrial Canada," the official publication of the Canadian Manufacturers' Association, offers two prizes of the value of \$60 and \$30 respectively, for the two best essays submitted on specified economic subjects.

1. The Prizes shall be awarded by the Council of the Faculty of Arts on the recommendation of the Department of Political Economy. The subjects shall be specified by the Staff of the Department of Political Economy, not later than March 10th in each year, and shall be forthwith submitted to the "Industrial Canada" Committee of the Canadian Manufacturers' Association for their approval, on receipt of which they shall be announced.

2. The Competition shall be open to all undergraduates of the University of Toronto, registered as in attendance on October 15th in each year, on which date the essay shall be sent to the Registrar.

3. The essays shall be approximately 3,500 words in length. The award shall be made by November 15th, and the prize essays shall be forwarded to "Industrial Canada" and shall become the property of that publication.

4. No award shall be made unless the staff of the Department of Political Economy is satisfied that the publication of the prize-winning essay will reflect credit on the University.

The subjects approved for competition in the year 1914 are as follows:

1. The Bridging of the Gulf between Producer and Consumer.
2. Systems of Land Taxation.
3. A Study of the Movement of Rural Population in Ontario in the Past Twenty Years.
4. Public Ownership of Telephones.

The awards have been as follows: 1912. I.—W. J. Little; II.—R. Forsyth. 1913. C. S. McKee and R. S. Rodd, aeq.

**UNDERGRADUATE AND GRADUATE.****HISTORY.**

U. The All Souls' Historical Essay Prize.

1. The Prize shall be called The All Souls' Historical Essay Prize.
2. It shall be of the value of one hundred and fifty dollars.
3. It shall be open to all undergraduate members of the University of Toronto, and to graduates who at the time of the awarding of the prize shall not have exceeded one year from the time of graduation.
4. It shall be awarded in every second year, beginning in 1910, and the subject shall be announced two years before the time of the award.



5. There shall be a choice of two subjects for the Essay—one to be taken from Ancient European History, and one from Mediæval or Modern European History.
6. The choice of subjects and the awarding of the prize shall be in the hands of an examining board—to consist of the President of the University of Toronto, the Professor of History in the University, and the Professor of Ancient History in University College; should any of these be unable to act, the remaining members of the Board shall be empowered to name a substitute.
7. The Essay shall involve research work of an original nature, and no particular books or courses shall be prescribed.
8. If the examiners judge any essay to be worthy, it shall be published at the expense of the University.
9. The examining board shall have power to prescribe limits as to the length of the essay, and to draw up additional regulations for the administration of the prize, provided always that sections 3, 5 and 7 of these regulations remain unchanged.
10. If no essay of sufficient merit be forthcoming it shall be in the power of the examiners to withhold the prize for that term, and to recommend that the money be devoted to whatever purpose they judge most fit to encourage historical research.

Essays must be sent to the Registrar of the University on or before April 1, 1914; they must be accompanied by a motto or pseudonym, and by another and separate envelope containing the name of the candidate, the name of his college, and the month and year of his matriculation. Candidates are advised to have their essays typed, and to confine them to (approximately) 30,000 words.

The subjects for 1914 and 1916 are:—

1914—The Marsic War (90-87 B.C.) *or* Constitutional Experiments under the Commonwealth and the Protectorate.

1916—Land Legislation during the Roman Republic *or* John Carteret, Earl Granville.

The award in 1912 was to G. L. B. Mackenzie.

#### POLITICAL SCIENCE.

- U. The Ramsay Scholarship in Political Economy of the value of \$60, the gift of Mr. William Ramsay. The scholarship is open for competition to all graduates or undergraduates who have been placed in the first class in one of the Economic subjects of the Fourth Year in the honour department of Political Science; but not more than two years must have elapsed since the competitor passed the examination above specified. The award is made upon an essay, the subject of which must be some question in Economics or Finance, of interest to



the commercial community in Canada, to be announced in May of each year and the competition closes on the 15th of September thereafter, by which date the essays must be in the hands of the Registrar of the University.

1914. Financial and Commercial Relations between Canada and the United Kingdom. The effect of loans and interest charges on the course of trade; the balance of trade; borrowing and trade preference; the composition of the traffic.

1915. The Economic Importance of the Development of Suburban Transportation.

Authorities must be carefully stated in every case.

#### POLITICAL SCIENCE.

U. The Alexander Mackenzie Fellowships in Political Science, two of the value of \$375 each, the gift of the friends of the late Hon. Alexander Mackenzie. These Fellowships are awarded annually to graduates of the University of Toronto, and they are tenable for one year, but the Council of the Faculty may, at its discretion, award either or both of them for a second term. The holder of a Mackenzie Fellowship shall devote his time to the prosecution of special studies at the University of Toronto under the direction of the head of the department in which the Fellowship is awarded. The sum of \$125 will be paid to the holder of the Fellowship on the 15th of October; a further sum of \$125 on the 15th of January, provided that the progress of his studies is satisfactory to the Council of the Faculty at that date; and a final instalment of \$125 on the 15th of April, or as soon thereafter as his thesis shall be accepted by the Council of the Faculty. During his tenure of the Fellowship he will not be permitted to pursue a professional or technical course of study, nor shall he engage in remunerative employment except by permission of the Council of the Faculty. He shall further conform to such other regulations as the Council of the Faculty may deem necessary for carrying out the object of special research for which these Fellowships are designed. Any violation of the conditions under which the appointment is made will operate to vacate the Fellowship. Applications must be sent in on or before the first of May in each year. Candidates for graduation in such year may apply in anticipation of their graduation.

#### PHILOSOPHY.

U. The George Paxton Young Memorial Fellowship in Philosophy, of the value of \$300, will be awarded in June, 1915. The holder must be a Bachelor of Arts who has taken an honour course in Philosophy. This scholarship is tenable for one year, and the holder must devote his whole time to the study of some topic falling under the general term Philosophy. He may pursue his studies either in the University of

Toronto, or in some other University approved by the Council of the Faculty; but in either case he shall furnish to the Council of the Faculty such evidence as may from time to time be required that he is faithfully observing the conditions under which the scholarship was awarded. Applications must be in the hands of the Registrar on or before June 15th, 1915. Further particulars may be obtained from the Registrar.

Those who have held the Young Fellowship are:—M. A. Shaw, B.A., Ph.D., 1897; G. J. Blewett, B.A., Ph.D., (ob.) 1899; R. J. Richardson, B.A., 1899; F. S. Wrinch, B.A., Ph.D., 1901; Miss M. A. Downing, B.A., 1903; J. I. Hughes, B.A., 1905; W. T. Brown, B.A., Ph.D., 1907; J. S. Sanderson, M.A., Ph.D., 1911; E. A. Bott, B.A., 1913.

#### CLASSICS.

- U. Through the liberality of J. W. Flavelle, Esq., LL.D., of Toronto, the Council of the Faculty is enabled to offer for competition in 1915 a Travelling Fellowship, of the value of \$750 per annum, tenable for two years in the Modern History School of the University of Oxford, and awarded as follows:—In 1915 in the Honour Course in English and History.

The object of the Fellowship has been stated by the donor to be, "in the first instance, to contribute something towards preparing and retaining in the country, if possible, a class of strong men who may eventually find their way into public life, or at least be with us as the development of higher education in the Dominion requires their services; in the second instance, to encourage the study of history, ancient and modern".

The following paragraphs are extracts from the regulations governing the award:—

- (1) The Fellowship shall be open to men who have obtained first class honours in "Classics", or "English and History—Classical option", as the case may be, in at least the Third and Fourth Years, but preferably during the whole of their course. Among the men thus qualified the Fellowship shall be awarded to the man who stands first in ancient or modern history as the case may be, as shown by his examinations. But the Board of Appointment (provided below) may by a vote, containing not more than one dissenting voice, pass over the candidate whose marks are highest in favour of one who, in their judgment, better meets the wishes of the donor as expressed in the words of the preamble "in the first instance . . . their services."
- (2) The Fellowship shall be awarded in the month of June, and there shall be eligible for it members both of the class then graduating and of the class which graduated in the previous year, subject to the provisions of clause (1).

- (3) The Fellowship shall be tenable only in the University of Oxford.
- (4) It shall be open to men only.
- (5) The Fellow shall take advantage of the provisions made by the University of Oxford for Colonial students, and graduate in Oxford in the Honour School of Modern History.
- (6) Where graduates of different years are applying, the Board, if not unanimous in their choice, shall appoint a special examination, such as they think fit, for the purpose of selecting the best candidate, and shall give notice of such examination. The award shall then be made by a vote containing not more than one dissenting voice and subject to the provisions of clause (1); but where all the candidates are of the same year no special examination shall be held.
- (7) Should a suitable man not be available in the department in which the Fellowship by rotation falls, it shall be awarded to the other department on the same terms, and then alternate as contemplated. Should no man be qualified in either department, the money shall accumulate, and be used for additional Fellowships of the same kind and on the same terms.
- (8) The following shall constitute the Board of Appointment:—  
Professors Hutton, Bell, Fletcher, Wrong, Robertson, Milner and Duckworth. It shall be the duty of this Board to interpret and apply these clauses, to give notice of the Fellowships and to call for applications.

The Fellowship has been awarded to the following:—1901, E. J. Kylie, M.A.; 1903, A. G. Brown, M.A.; 1905, S. A. Cudmore, B.A.; 1907, W. S. Wallace, B.A.; 1910, D. P. Wagner, B.A.; 1911, F. H. Underhill, B.A.; 1913, H. V. Wrong, B.A.

#### SCIENCE.

- U. The 1851 Exhibition Science Research Scholarship, of an annual value of £150, is awarded in alternate years by His Majesty's Commissioners for the Exhibition of 1851, on the recommendation of the Senate, to a student who has given evidence of capacity for advancing Science or its application by original research.

The regulations of His Majesty's Commissioners are as follows:—

1. The Scholarships are intended, not to facilitate attendance on ordinary collegiate studies, but to enable students who have passed through a College curriculum and have given distinct evidence of capacity for original research, to continue the prosecution of Science with the view of aiding its advance or its application to the industries of the country.

2. The Scholarships are of £150 a year, and are ordinarily tenable for two years, the continuation for the second year being dependent on the work done in the first year being satisfactory to the Scholarships Committee.

3. A limited number of the Scholarships are renewed for a third year where it appears that the renewal is likely to result in work of scientific importance.

4. Candidates are recommended by the governing bodies of the Universities and Colleges to which Scholarships are allotted, and the recommendations are considered and decided upon by the Scholarships Committee.

5. The candidate must be a British subject.

6. The candidate must have been a *bona fide* student of Science in a University or College in which special attention is given to scientific study for a term of three years.

7. The candidate shall be eligible for a Scholarship, provided (1) that he has spent the last full academic year immediately prior to the time of nomination as a student in any faculty or scientific department of that institution by which he is nominated, or (2) that he has been a student of such institution for a full academic year ending within twelve months prior to the time of nomination and since ceasing to be a student of that institution has been engaged solely in scientific study.

The word "student" in the preceding regulation must be understood as comprehending one engaged in undergraduate or post-graduate work.

8. The candidate must indicate high promise of capacity for advancing Science or its applications by original research. Evidence of this capacity is strictly required, this being the main qualification for a Scholarship. The most suitable evidence is a satisfactory account of a research already performed, and the Commissioners will decline to confirm the nomination of a candidate unless such an account is furnished, or there is other equally distinct evidence that he possesses the required qualification.

9. A candidate whose age exceeds thirty will only be accepted under very special circumstances.

10. A Scholarship may be held at any University in England or abroad, or in some other institution to be approved of by the Commissioners. Every scholar is, in the absence of special circumstances, required to proceed to an institution other than that by which he is nominated.

11. The principal work of a scholar must be research in some branch of Science, the extension of which is important to the national industries.

12. Scholars are required to devote themselves wholly to the objects of the Scholarships, and are forbidden to hold any position of emolument.

13. Scholars are required to furnish reports of their work at the end of each year of the tenure of their Scholarships. At the expiration of each Scholarship the reports of the scholar are referred to an eminent authority on the subject treated of, who furnishes an opinion thereon to the Commissioners.



14. The Scholarship stipend is payable half-yearly in advance, but £25 is reserved from the fourth payment until the scholar has made a satisfactory final report.

The regulations adopted by the Senate are as follows:—

The departments, students of which shall be eligible to be candidates, are:—1. Bacteriology; 2. Biology; 3. Chemistry; 4. Chemistry (applied); 5. Engineering (chemical); 6. Engineering (electrical); 7. Engineering (mechanical); 8. Engineering (civil); 9. Engineering (mining); 10. Forestry; 11. Geology; 12. Mineralogy; 13. Pathology; 14. Physics; 15. Physiology.

A student shall not be deemed to be ineligible because of his being on the teaching staff of the University, if he has not been in receipt of a salary of more than \$500 per annum and has not been on the teaching staff for more than two years from graduation.

A student shall be deemed to be eligible in the year in which he intends to graduate, but if nominated for the Scholarship his nomination shall be subject to his being successful in passing his examination for his degree.

The nomination of the candidate shall be made by a Board composed of seven members appointed by the Senate, and the Board shall consist of the Chancellor, the President, Mr. Featherstone Osler, the Honourable Mr. Justice Maclaren, the Honourable Mr. Justice Riddell and Mr. J. A. Worrell, and the Board shall have power to call to its aid as assessor any member of the teaching staff.

In the event of there being no suitable candidate, the Senate may recommend that a probationary bursary of £70 be awarded to a student who is not immediately qualified for a scholarship, but who gives promise of becoming so, after a year's experience of research work.

The regulations of His Majesty's Commissioners respecting probationary Bursaries are as follows:—

1. A Bursary is intended for the maintenance for one year of a student who proposes to become a Science Research Scholar under the scheme of the Commissioners at the expiration of the period covered by the Bursary, in order to afford him an opportunity of proving his power to carry on independent research. The authorities of an institution recommending a student for a Bursary will be presumed to have satisfied themselves that he *bona fide* intends to accept a Scholarship if subsequently appointed to one.

2. An applicant for a Bursary must, except as to evidence of capacity for original research, fulfil all the conditions for the time being laid down for appointment to a Science Research Scholarship. He must have passed a B.Sc. examination (or its equivalent) with honours before the commencement of the period covered by the Bursary. His age must not exceed twenty-five, except under very special circumstances.



3. A Bursary is tenable for one year, and is of the value of £70, payable by half-yearly instalments in advance, the second instalment being payable on the receipt of a certificate from the Professor under whom the holder has been working that he has faithfully performed his duties.

4. A Bursary will be awarded on condition that the nominating institution undertakes to provide for the holder facilities for conducting research, and the requisite supervision, free from charge and incidental expenses.

5. The holder of a Bursary shall devote himself exclusively to research and work preparatory to research, and none of his time shall be spent in assisting a teacher in his duties. The holder of a Bursary must not hold any other Bursary, Scholarship, or position of emolument.

6. The holder of a Bursary shall on or before 1st May in the year of tenure send to the office of the Commissioners an account of the research work performed by him, together with an application for appointment to a Science Research Scholarship. The Commissioners will expect to receive from the Professor under whom the holder of the Bursary shall have worked, a confidential opinion as to his capacity and qualifications.

7. The Commissioners may either appoint the holder of a Bursary to a Science Research Scholarship, or at their absolute discretion decline to appoint him, and in the latter case, shall not be called upon to state any ground for their decision.

8. A Science Research Scholarship, if granted, shall be held on the usual conditions attached to the Scholarships or on any special conditions which the Commissioners may impose. But a scholar who previous to appointment has held a Bursary shall not be eligible for exceptional renewal of his Scholarship for a third year.

The 1851 Exhibition Science Research scholars:—

F. J. Smale, B.A., Ph.D., 1892-93, 1893-94, 1894-95.

F. B. Kenrick, M.A., Ph.D., 1894-95, 1895-96, 1896-97.

A. M. Scott, B.A., Ph.D., 1896-97, 1897-98.

W. G. Smeaton, B.A., Ph.D., 1898-99, 1899-1900.

J. Patterson, B.A., 1900-01, 1901-02.

W. C. Bray, B.A., 1902-03, 1903-04.

E. F. Burton, Ph.D., 1904-05, 1905-06.

R. H. Clark, M.A., 1906-07, 1907-08.

C. S. Wright, M.A., 1908-09, 1909-1910.

W. P. Thompson, B.A., 1910-11, 1911-12.

A. J. Dempster, M.A., 1912-13, 1913-14.

### **The Rhodes Scholarship.**

U. The trustees of the late Mr. C. J. Rhodes have assigned one of the Rhodes Scholarships to the Province of Ontario.

The following are excerpts from the regulations laid down by the trustees:—

The election of scholars in Canada under the Rhodes bequest will take place each year during the month of January. The scholars will begin residence at Oxford in October of the year for which they are elected.

Each scholarship is tenable for three years, and is of the value of £300 per annum.

Candidates shall be British subjects, and unmarried. They must have passed their nineteenth, but not have passed their twenty-fifth birthday, on October 1st of the year for which they are elected.

An elected scholar must have reached at least the end of his sophomore or second year's work at some recognized degree-granting University or College of Canada.

Candidates may elect whether they will apply for the Scholarship of the Province in which they have acquired any considerable part of their educational qualification, or for that of the Province in which they have their ordinary private domicile, home or residence. They must be prepared to present themselves for examination or election in the Province they select. No candidate may compete in more than one Province, either in the same or in successive years.

Only candidates who have passed an equivalent to the Oxford Responsions examination or those who are exempted from Responsions by the Colonial Universities' Statute, are eligible for election.

As the University of Oxford has admitted this University to the privileges of a Colonial University, a student who has completed the first and second years with Greek as an optional subject is admitted to advanced standing at Oxford, and is excused from Responsions.

In accordance with the wish of Mr. Rhodes, the trustees desire that "in the election of a student to a scholarship, regard shall be had to (i) his literary and scholastic attainments, (ii) his fondness for and success in manly out-door sports, such as cricket, football, and the like, (iii) his qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindliness, unselfishness and fellowship, and (iv) his exhibition during school-days of moral force of character, and of instincts to lead and to take an interest in his schoolmates". Mr. Rhodes suggested that (ii) and (iii) should be decided in any school or college by the votes of fellow-students, and (iv) by the head of the school or college.

Additional information will be furnished to intending candidates on application to the President of the University.

The election of a Rhodes Scholar by this University will take place in January, 1915.

The Rhodes Scholars:—

1904: E. R. Paterson, B.A., University College.

1906: R. C. Reade, B.A., University College.

1908: W. K. Fraser, B.A., University College.

1910: A. L. Burt, B.A., Victoria College.

1913: C. H. Carruthers, B.A., University College.

U. Tutorial Fellowships in Mathematics, Chemistry and Biology, of the annual value of \$500 each, are awarded annually. The selection is made from among graduates of the University. Each Fellow is appointed annually; but he may be reappointed for a period not exceeding, in all, three years.

Each Fellow is required to assist in the teaching and practical work of his department, under the direction of the professor or lecturer. The Fellows are selected with a special view to their aptitude for teaching and their attainments in the department in which the appointment is to be made. Every Fellow on accepting his appointment comes under an obligation to fulfil the duties of his Fellowship during the academic year in which he is appointed, unless specially exempted.

In the Departments of Psychology, Physics, Biology, Physiology, Chemistry and Mineralogy a number of Assistant Demonstrators and Class Assistants are appointed annually, whose appointments are made subject to the same conditions as those governing the Tutorial Fellowships. The annual remuneration attached to these positions varies according to the extent of the duties assigned to the appointees.

Candidates for the Fellowships must send their applications annually to the Registrar, not later than the first day of June.

### THE McCHARLES PRIZE.

This prize was established in connection with the bequest of the late Æneas McCharles of Provincial Government bonds of the value of \$10,000, and is awarded on the following terms and conditions, namely, that the interest therefrom shall be given from time to time, but not necessarily every year, like the Nobel prizes in a small way: (1) To any Canadian from one end of the country to the other, and whether student or not, who invents or discovers any new and improved process for the treatment of Canadian ores or minerals of any kind, after such process has been proved to be of special merit on a practical scale; (2) Or for

any important discovery, invention or device by any Canadian that will lessen the dangers and loss of life in connection with the use of electricity in supplying power and light; (3) Or for any marked public distinction achieved by any Canadian in scientific research in any useful practical line. The following conditions, as passed by the Board of Governors, determine the method of award:—

(1) The title shall be the McCharles Prize.

(2) The value of the prize shall be One Thousand Dollars (\$1,000,00) in money.

(3) The term "Canadian" for the purpose of this award shall mean any person Canadian born who has not renounced British allegiance; and for the purpose of the award in the first of the three cases provided for by the bequest, domicile in Canada shall be an essential condition.

(4) Every candidate for the prize shall be proposed as such in writing by some duly qualified person. A direct application for a prize shall not be considered.

(5) No prize shall be awarded to any discovery or invention unless the same shall have been proved to the satisfaction of the awarding body, to possess the special practical merit indicated by the terms of the bequest.

(6) The order of priority in which the three cases stand in the wording of the bequest shall be observed in making the award; that is, the award shall go *caeteris paribus* to the inventor of methods of smelting Canadian ores; and, failing such inventions, to the inventor of methods for lessening the dangers attendant upon the use of electricity; and only in the third event, if no inventors of sufficient merit in the field of metallurgy and electricity present themselves, to the inventor distinguished in the general field of useful scientific research.

(7) The first award was made in 1910.

(8) The composition of the awarding body shall be as follows:—

An expert in Mineralogy,

An expert in Electricity,

An expert in Physics,

and four other persons. All of the members of this body shall be nominated by the Board of Governors of the University of Toronto.

### SPECIALISTS' CERTIFICATES.

#### Proficiency Course for Public School Inspectors.

1. A candidate in the General Course who desires to secure the academic qualifications for the Public School Inspector's certificate from the Ontario Department of Education is required to select the subjects of his Course in accordance with the following schedule:
2. He is also required to obtain a minimum of 40% in each of the prescribed subjects and an average of 60% in each of the four years.



**FIRST YEAR:**

Latin, French or German, Greek and Roman History, Mathematics 1-4-6, Mechanics and Physics, Biology, of the General Course and Honour English.

**SECOND YEAR:**

Latin, French or German, Psychology, History, Geology, Chemistry, of the General Course and Honour English.

**THIRD YEAR:**

French or German, History, Ethics, Economics, Biology, Physics, Sanitary Science (a course to be established) of the General Course and Honour English (omitting Old English).

**FOURTH YEAR:**

French or German, History, Ethics, Economics, Chemistry, Geology, of the General Course and Honour English (omitting Old English).

**Specialists' Certificates in Science and Agriculture.**

Candidates who desire to secure Specialists' certificates in Science and Agriculture are required to pursue in the University the special Course either in Biology or in Geology and Mineralogy to the end of the Second Year.

The necessary subjects of the General Course in the First Year are Latin, English, German, French, and Mathematics 1, 4, 6, and in the Second Year, English, German, French and Geology. In the Third and Fourth Years the student pursues his work at the Ontario Agricultural College, the subjects of the Third Year being English and History of the General Course in Arts, together with Rural Economics, Botany, Chemistry (Qual. Anal.), Entomology, Physics (Cold Storage and Meteorology), Beekeeping, Animal Husbandry, Dairy Husbandry, Field Husbandry, Poultry Husbandry, and Horticulture. In the Fourth Year the subjects are English and History of the Fourth Year General Course in Arts, and Rural Economics, Botany, Zoology, Entomology, Bacteriology, Chemistry, Horticulture, Field Husbandry, Animal Husbandry, and Forestry.

In the First and Second Years the standards are identical with those in force in the Faculty of Arts. In the Third and Fourth Years the standard is 40% in each subject except in Botany, Zoology, Entomology, Bacteriology and Chemistry in which an average of 66% must be obtained. The examinations of the Third and Fourth Years are conducted by the University. The degree of B.Sc., (Agr.) is awarded by the University to those candidates who successfully complete this course.



**Department Regulations respecting Specialists' Certificates.**

The following paragraphs are extracts from the Regulations of the Education Department for the Province of Ontario.—

Any person who obtains a degree in Arts in the Honour Department of Mathematics, Science, Classics, English and History, Moderns and History, or French and German, as specified in the Calendar of any University of Canada and accepted by the Education Department, who has graduated with at least second class honours (or sixty-six per cent.) in each subject of such Honour Department and who has been in actual attendance in such department at a University for not less than two academic years, shall be entitled to the academic qualifications of a specialist in such department.

A graduate who has not taken an honour degree in one of the above courses shall be entitled to the non-professional standing of a specialist, on submitting to the Education Department a certificate from the Registrar of the University, that he has passed, subsequently to graduation, the examinations prescribed for each year of the honour course of the department in which he seeks to be recognized as a specialist, or any examinations which are recommended by the University as equivalent thereto and accepted as such by the Education Department; and that he has been in actual attendance in such department at a University for not less than two academic years in preparation for the examination therefor.

**THE PEARSON KIRKMAN MARFLEET LECTURESHIP.**

In November 1910, Mrs. Lydia A. Marfleet, of Prophetstown, Illinois, gave the sum of \$5,000 to found a lectureship in the University of Toronto, to be called, in memory of her late husband, the Pearson Kirkman Marfleet Lectureship.

The Governors accepted the trust, and have established and agreed to maintain the lectureship in perpetuity.

The Governors have undertaken to appoint at least once in every four years some person or persons to deliver a course of lectures in the University of Toronto on this foundation; and as the late Pearson Kirkman Marfleet, an American citizen, devoted constant thought to the public welfare of his own country, and also watched the growth of the Dominion of Canada with profound interest, the Governors have further undertaken that such person or persons as may from time to time be appointed shall, as far as possible, be chosen with regard to their special ability to set forth some phase or phases of the national movements of each or both countries.

The first course of lectures under this foundation will be delivered during the session 1914-1915, by the Honorable William Howard Taft, Ex-President of the United States.

**UNIVERSITY OF OXFORD.**

A student of this University who has completed two years of the course in Arts may be admitted to the status of a Junior Colonial Student at the University of Oxford, while a student who has completed three years, and has taken honours in the final examination or who has obtained second class honours in the Third or Fourth Year, may be admitted as a Senior Colonial Student. In each of these cases, on complying with certain conditions, a student may obtain his degree at Oxford in two years.

A student of this University, who has passed the examination in Greek of the Second or the Third or the Fourth Year is exempt from the examination in Greek, which is compulsory for all candidates for degrees in Arts in the University of Oxford.

**UNIVERSITY OF CAMBRIDGE.**

The University of Toronto is affiliated to the University of Cambridge and matriculated students who have passed the examinations of the First and Second Years are entitled to admission to the privileges of affiliation, which enable a student to take his degree at Cambridge without completing the full period of residence.

# COURSES OF INSTRUCTION.

The members of the staff indicated under the headings "The Classics", etc., in the following pages, are those of the Session 1913-1914.

## THE CLASSICS.

### THE UNIVERSITY OF TORONTO:

A. J. BELL, B.A., PH.D. . . . . *Professor of Comparative Philology.*

### UNIVERSITY COLLEGE:

MAURICE HUTTON, M.A., LL.D. . . . . *Professor of Greek.*  
 A. CARRUTHERS, M.A. . . . . *Associate Professor of Greek.*  
 J. FLETCHER, M.A., LL.D. . . . . *Professor of Latin.*  
 W. S. MILNER, M.A. . . . . *Professor of Greek and Roman History.*  
 G. W. JOHNSTON, B.A., PH.D. . . . . *Associate Professor of Latin.*  
 G. OSWALD SMITH, M.A. . . . . *Assistant Professor of Latin.*  
 A. GRANT BROWN, B.A. . . . . *Lecturer in Ancient History.*  
 E. A. DALE, M.A. . . . . *Lecturer in Greek.*  
 E. W. V. CLIFTON, B.A. . . . . *Lecturer in Latin.*  
 C. N. COCHRANE, B.A. . . . . *Lecturer in Greek.*

### VICTORIA COLLEGE:

A. J. BELL, B.A., PH.D. . . . . *Professor of Latin.*  
 J. C. ROBERTSON, M.A. . . . . *Professor of Greek.*  
 A. L. LANGFORD, M.A. . . . . *Professor of Greek.*  
 N. W. DEWITT, B.A., PH.D., *Professor of Latin and Ancient History.*  
 C. B. SISSONS, B.A., *Associate Professor of Ancient History and Latin.*  
 E. A. DALE. . . . . *Special Instructor in Ancient History.*

### TRINITY COLLEGE:

REV. H. T. F. DUCKWORTH, M.A. . . . . *Professor of Ancient History.*  
 E. T. OWEN, M.A. . . . . *Professor of Greek.*  
 G. S. BRETT, M.A. . . . . *Professor of Ethics and Ancient Philosophy.*  
 W. A. KIRKWOOD, M.A., PH.D. . . . . *Professor of Latin.*  
 J. N. WOODCOCK, M.A. . . . . *Lecturer in Classics.*  
 J. H. MOZLEY, B.A. . . . . *Lecturer in Classics.*  
 D. DUFF, M.A., B.D. . . . . *Lecturer in Classics.*

### ST. MICHAEL'S COLLEGE:

REV. HENRY CARR, B.A. . . . . *Professor of Greek.*  
 REV. T. J. HAYES. . . . . *Professor of Latin.*  
 REV. R. McBRADY. . . . . *Professor of Latin.*

Special importance is attached, all through the course, to accurate scholarship and the appropriate rendering into English of the prescribed texts. The historical and philosophical books (and especially those prescribed for the Third and Fourth Years) are to be read for the subject-matter and in connection with the History and Philosophy to which they respectively refer.

## GREEK.

1a. *General Course*: Translation at sight of passages of ordinary difficulty from Xenophon's historical works; Greek Grammar (including sentences to test accident and syntax;) Bell's Second Greek Reader, Four hours a week.

1b. *Classics*: Greek Grammar; translation at sight; Greek prose composition; Plato, *Apology*; Homer, *Iliad* XVIII., XXII.-XXIV.; Herodotus, VIII.; Thucydides, I., 89-117, 128-138. Five hours a week.

1c. *English and History*: The same as (b), omitting Thucydides.

1d. *Greek and Hebrew*: The same as (b), omitting Æschylus.

2a. *General Course*: Translation at sight of easy passages of Greek; Greek Grammar; translation from English into Greek of sentences based on North and Hillard, *Greek Prose Composition*, pages 1-155 inclusive; Homer, *Iliad* XXII., and passages from Homer in Rennie's *Selections*; Plato, *Apology*. Four hours a week

2b. *Classics*: Greek Grammar; translation at sight; Greek prose composition; Sophocles, *Antigone*; Homer, *Iliad* XXII.-XXIV.; Theocritus, *Idylls* I., VII., VIII., XIII., XV., XXI.; Aristophanes, *Birds*; Thucydides, I., 1-88, 118-127, 139-end, and II., 35-46. Five hours a week.

2c. *English and History*: The same as (b), omitting Greek Grammar, Theocritus and Thucydides.

2d. *Greek and Hebrew*: The same as (b), omitting Greek Grammar, Greek Prose Composition and Thucydides.

3a. *General Course*: Translation at sight of easy passages of Greek; Greek Grammar; Sophocles, *Antigone*; Aristophanes, *Birds*; Grant, *Age of Pericles*. Two hours a week.

3b. *Classics*: Grammar and Philology (King and Cookson, *Introduction*, omitting syntax); Greek prose composition; translation at sight; Euripides, *Bacchæ*; Sophocles, *Œdipus Rex*; Aristophanes, *Clouds*; Thucydides, II., 1-34, 47-end and III.; Plato, *Republic* I. to IV.; Aristotle, *Ethics* I. to IV. and X. Chaps 6 to 9; Ancient Philosophy including (a) Greek speculative theories before Socrates; (b) Socrates and his contemporaries; (c) the doctrines of Plato and Aristotle; (d) Epicureanism and Stoicism; elementary course with special reference to prescribed texts. In addition to the Greek texts here prescribed, the student should read Grote, *History of Greece*, Chaps. LXVII. and LXVIII.; and Cushman, *Beginner's History of Philosophy*, or Rogers, *Student's History of Philosophy*. Nine hours a week.

3c. *English and History*: Plato, as in (b).

3d. *Greek and Hebrew*: Plato, Aristotle, *History of Greek Philosophy*, and Sophocles, *Œdipus Rex*, as in (b).

3e. Essays on prescribed topics.

3f. Hellenistic Greek; Selections from Septuagint (Conybeare and Stock).

3g. *English and History* (Special Option): Aristotle, as in (b).



4a. *General Course*: Translation at sight of easy passages of Greek; Greek Grammar; Plato, Gorgias; Butcher, Aspects of Greek Genius, Chaps. 1 and 2, and Harvard Lectures, Chaps. 1, 2, and 3. Two hours a week.

4b. *Classics*: Greek prose composition; translation at sight; Herodotus, VII., VIII. and IX.; Thucydides, VI. and VII.; Plato, Republic; Aristotle, Ethics, Book X., Chaps. 6 to 9; Politics II.; with a survey of Greek Philosophy from Socrates to Aristotle (Windelband, History of Ancient Philosophy); Æschylus, Agamemnon; Aristophanes, Frogs; Theocritus, Idylls I., VII., VIII., XIII., XV., XXI.; Aristotle, Poetics, with the history of the Greek genius and Greek poetry so far as covered by the following books:—Butcher's Aspects of Greek Genius (2nd edition) and Harvard Lectures, Matthew Arnold's Essay On Translating Homer, Butcher's essays in his edition of the Poetics, Jebb's Classical Greek Poetry, Moulton's Ancient Classical Drama. Seven hours a week.

4c. *English and History*: Aristotle, Poetics (with books) as in (b).

4d. *Greek and Hebrew*: Plato, History of Philosophy and Æschylus, as in (b).

4e. Essays on prescribed topics.

4f. Hellenistic Greek: The Septuagint, Book of Judges.

4g. *English and History (Special Option)*: Plato, Republic as in (b).

## LATIN.

1a. *General Course*: Translation at sight of an easy prose passage; translation into Latin of sentences based on the prescribed Cicero; questions on grammar and prosody, and on the subject-matter of the texts; Horace, Odes III. and IV.; Cicero, Pro Lege Manilia. Four hours a week.

NOTE.—Candidates who have not matriculated, or whose last examination in Latin was prior to 1913, cannot join this class without previously satisfying the instructors as to their ability to profit by the instruction given.

1b. *Classics*: Latin Grammar, including prosody; Latin Prose Composition; Sight Translation; Virgil, Georgics I. and IV. (Sidgwick or Page); Catullus (Simpson); Horace, the Odes not read at Matriculation; Cicero, Pro Murena, Pro Milone, Philippic II. The paper on grammar will be based largely on the prescribed authors; the papers on the texts will include questions on the contents, style, and literary history of the books. Four to five hours a week.

1c. *English and History (Classical Option)*: The same as (b).

1d. *English and History (Moderns Option)*: Latin prose composition; Virgil, Georgics I. and IV. (Sidgwick or Page); Cicero, Philippic II. Three hours a week.

2a. *General Course*: Translation at sight of an easy passage from Livy; translation into Latin of sentences to illustrate Latin syntax; translation into Latin of simple narrative based on the prescribed Livy; Livy, Book



XXI.; Catullus (Simpson); questions on grammar and prosody and on the subject-matter of the texts. Four hours a week.

*2b. Classics:* Latin Grammar; Latin Prose Composition; Sight Translation; Tacitus, Annals, Books I. and II.; Livy, Books V. and VI.; Virgil, Eclogues; Plautus, Trinummus; Terence, Andrea; Martial, Select Epigrams; Horace, Epistles; Sellar, The Roman Poets of the Republic. Five to six hours a week.

*2c. English and History:* The same as (b), omitting Latin Grammar, Terence and Martial.

*3a. General Course for 1914-1915:* Latin Grammar, Latin Prose Composition, Sight Translation; Cicero, Pro Archia; Virgil, Eclogues I. and IV., Aeneid VI.; selections from Gillies and Cumming's "Latin of the Empire"; Quintilian, Estimate of Latin Writers; Seneca, The Choice of Books, The God Within Us; Lucan, The Causes of the Civil War; Martial, Country Life, To his Book, To Quintilian, The Day in Rome, A Suburban Villa, The Schoolmaster's Neighbour, The Happy Life, Bilbilis and Rome, To His Townsmen, To Juvenal; Statius, To Sleep; Ausonius, The Moselle; Claudian, Imperial Rome, The Old Man of Verona; Rutilius Namatianus, Farewell to Rome; Tiberianus, A Country Scene. Two hours a week.

*3a. General Course for 1915-1916:* Latin Grammar, Latin Prose Composition, Sight Translation; Tacitus, Agricola; Horace, Epistles, Book I.; selections from Gillies and Cumming's "Latin of the Empire"; Juvenal, Satires I., III., X.; Pliny, The Death of the Elder Pliny, The Eruption of Vesuvius, The Treatment of the Christians. Two hours a week.

*3b. Classics:* Latin Grammar and Philology; Latin Prose Composition; Sight Translation; Horace, Satires; Persius, Satire V.; Juvenal, Satires I., III., V., VII., VIII., X., XIII.; the history of Roman Satire.

Plautus, Captivi; Terence, Phormio; Sellar, Roman Poets of the Republic, Chaps. VI. and VII.; Virgil, Aeneid, Books X., XI., XII.

Cicero, De Finibus, Books I. and II.; Lucretius, Book I.; questions on the Epicurean system.

Tacitus, Annals, Books III. to VI. (Furneaux, large edition); Monumentum Ancyranum (Mommsen); reign of Tiberius and introduction to the history of the principate (Merivale, The Romans under the Empire, Vols. III., IV., and V.; Boissier, Tacitus). Six hours a week.

*3c. English and History (Special Option):* Cicero's Letters (Watson), Books I. and II.; Caesar, Civil War, Book I.

*3d. Essays on prescribed topics*

*4a. General Course for 1914-1915.* The same as 3 (a). Two hours.

NOTE 1. Students of the Fourth Year, who have not passed in the Latin of their Third Year, will be required, at the B.A. examination of 1915, to take an additional paper on the work of the alternative course.

NOTE 2. Students of the Fourth Year, who through absence from the University, have not taken the two Latin courses in consecutive years, will, at their Final Examination, be required to take the paper on the authors prescribed in 3 (a), which they did not take in their Third Year.

4b. *Classics*: Latin Prose Composition; Sight Translation; Virgil, Eclogues IV., VI., VIII., X., Georgics I. and IV., Aeneid; Hesiod, Works and Days; questions in Virgilian criticism.

Tibullus, I., 1 and 3, II., 1 and 5 (Postgate); Propertius, I., 1, 2, 5, 8, 21, 22, III., 5, 21, 29, IV., 1, 3, 7, 9, V., 2, 6, 11 (Postgate); Martial, Select Epigrams; Quintilian, Book X.; questions on the history of Roman literature.

Cicero's Letters (Watson); Sallust, Catiline; Caesar, Civil War; Roman constitutional history from the death of Sulla to the death of Cicero (Mommson, Book V.; Ferrero). Five hours.

4c. *English and History*: Cicero's Letters (Watson); Sallust, Catiline; Caesar, Civil War. Two hours.

4d. Essays on prescribed topics.

### GREEK AND LATIN.

*Optional Subjects for the highest honours in Classics (any three to be taken).*

1. Aristotle, Politics, Books V., VI., 1-13, VII. Newman's order of books); with special topics in the earlier books.

2. Aristotle, Ethics, Books V., VI., VII. (Stewart).

3. Thucydides: Translation of Books IV, V., and VIII., with historical questions on the text of the eight Books.

4. Cicero, De Finibus, Books III. and IV.; Marcus Aurelius, Meditations, Book IV., with questions on the Stoic philosophy (Davidson, The Stoic Creed).

5. Historical Syntax, p. 90, 2.

6. History of Philosophy; Ancient Philosophy including (a) the Platonic and Aristotelian systems; (b) later developments of Greek thought; Hellenism and the Roman Empire; Paganism and Christianity; neo-Platonism (Windelband, History of Philosophy, Part II.).

7. Latin Epigraphy: An introductory study of Latin Epigraphy followed by reading of selected inscriptions.

8. Greek and Roman Archaeology: A general knowledge of the subject of classical Archaeology; lectures on sculpture, painting, architecture, and topography.

9. Elementary Sanskrit, p. 90, 3.

### GREEK AND ROMAN HISTORY.

1. General History of Greece to 146 B.C. General History of Rome to A.D. 476 (Goodspeed, History of the Ancient World; Kimball, Bury's Student's History of Greece; Pelham, Outlines of Roman History). The course aims at a simple outline of the general historical movement in the Græco-Roman world and at an appreciation of the most characteristic features of this Mediterranean civilization.

2a. Greek History to 454 B.C.; Grote (Mitchell and Caspari) I., II., III., IV. and XV.

Grant, Age of Pericles; historical questions on the prescribed. Thucydides

2b. Roman constitutional and political history to B.C. 264;—the city state, criticism of the regal period, the revolution of 509, the struggle between the orders, the conquest and organization of Italy. Mommsen, Books I. and II.; Taylor, Constitutional and Political History of Rome; Warde Fowler, The City State. Fustel de Coulanges, La Cité antique, omitting those portions of the book which deal with Greek history. Classical students are recommended to purchase Mommsen complete early in their course, but How and Leigh's History of Rome (cc. i-xvii.) covers this period satisfactorily.

3a. A more mature study of Greek and Roman history down to the death of Julius Caesar, with special work on selected topics, *e.g.*:—The making of historical Greece; The Greek mind and character; The permanent elements in Greek culture; The causes, social, economic and political, of the failure of Greek liberty and the fall of the Roman Republic; The spread of Hellenism; Greek and Roman religion.

For text-books Bury's History of Greece and How and Leigh's of the Roman Republic will be used.

3b. Greek history B.C. 454 to B.C. 399; Grote (Mitchell and Caspari) XVI. to XXI.; Zimmern, The Greek Commonwealth; historical questions on the prescribed Thucydides.

3c. Greek History, omitting historical questions on the prescribed Thucydides.

3d. Roman history from B.C. 264 to B.C. 78, *i.e.*, the period of foreign conquest and the beginning of the Revolution; Mommsen, Books III. and IV.; Taylor, Constitutional and Political History of Rome.

4a. The history of the Roman Empire down to the death of Justinian with special work on selected topics, *e.g.*:—the more important constitutional changes; the conflict between Christianity and Paganism; Roman society (1) at the close of the Republic, (2) during the period of "the Roman peace", (3) in the last century of the Western Empire; the causes of the fall of the Empire in the West; Roman Education; the contribution of Rome to civilisation.

For text-books Pelham, Outlines; Bury, Student's Roman Empire (filling the gap between the Republic and Gibbon); Stuart-Jones, Roman Empire (though nothing can take the place of the actual reading of Gibbon), and Finlay, Greece under the Romans.

4b. General questions on Greek history.

4c. Roman constitutional and political history from the death of Sulla to the death of Cicero; Mommsen, Book V., Ferrero.

4d. Roman Institutions: Greenidge, Roman Public Life; Warde Fowler, The religious experience of the Roman People; Deloume, Les Manieuvres d'argent à Rome.

# COMPARATIVE PHILOLOGY AND SANSKRIT.

1. *Classics (Third Year)*: King and Cookson, Introduction, omitting syntax.

2. *Classics (Fourth Year)*: Comparative Greek and Latin syntax under the following heads:—(a) the substantive, number, gender and case; (b) the verb, voice, mood and tense; (c) particles and repositions. Students will use Thompson, Greek Syntax; Goodwin, Greek Moods and Tenses; Gildersleeve, Latin Grammar; Roby, Latin Grammar; Bennett, Appendix.

3. *Classics (Fourth Year)*: Sanskrit; elements of grammar and exercises in translation. Students will use Perry's Primer and Lanman's Reader.

## ORIENTAL LANGUAGES.

### UNIVERSITY COLLEGE:

J. F. McCURDY, PH.D.; LL.D. .... *Professor.*

I. G. A. BENZINGER, PH.D. .... *Associate Professor of Oriental Languages.*

W. R. TAYLOR, PH.D. .... *Special Lecturer.*

### VICTORIA COLLEGE:

J. F. McLAUGHLIN, B.A., B.D. .... *Professor.*

S. H. HOOKE, M.A., B.D. .... *Associate Professor.*

W. A. POTTER, B.A., B.D. .... *Lecturer.*

### TRINITY COLLEGE:

REV. F. H. COSGRAVE, B.A., B.D. .... *Professor.*

W. ROLLO, M.A. .... *Lecturer.*

1a. A course in the history of the Hebrew people from the Exodus to 586 B.C.; a literary study of the books of Amos, Hosea, Isaiah and Micah. One hour a week.

1b. Hebrew Grammar; translation from Hebrew into English of I. Samuel 1, 3-7 and exercises in translating from English into Hebrew. Davidson's Hebrew Grammar; Kittel's Biblia Hebraica. Four hours a week.

1c. Hebrew Grammar with translation from Hebrew to English as determined by the staff in Oriental Languages. One hour a week during the Easter Term.

2a. A course in the history of the Hebrew people from 586 to 4 B.C.: a literary study of Jeremiah, Ezekiel, Daniel, Joel, Obadiah, Jonah, Nahum, Habakkuk, Zephaniah, Haggai, Zechariah, Malachi. One hour a week.

2b. Hebrew Grammar with special attention to syntax; translation from English into Hebrew; translation into English of Genesis 1-4, 37, 40-45; Deuteronomy 5-11; II. Samuel 14-19; history of the Massoretic Text and the Versions; outlines of the geography of Palestine. Davidson's Hebrew Grammar; Kittel's Biblia Hebraica; Davies' Lexicon or Brown, Driver, and Briggs' Lexicon. Four hours a week.

2c. Translation into English of the book of Judges, with special attention to Hebrew syntax; Hebrew prose exercises. Gesenius Kautzsch's Hebrew Grammar; Davidson's Hebrew Syntax. One hour a week.



2d. Translation into English of Exodus 8-20; Deuteronomy 12-17; I. Samuel 9-19; II. Kings 17-23. Three hours a week.

2e. History of the Western Orient until 722 B.C. One hour a week.

3a. A literary study of the books from Genesis to Nehemiah and of the Synoptic Gospels. Two hours a week.

3b. Translation from English into Hebrew; Hebrew history from the settlement in Canaan to the end of the Kingdom (586 B.C.). Davidson's Hebrew Syntax. One hour a week.

3c. Translation into English of Amos; Isaiah 1-6; 40-45 and 52-55; II. Kings 15-25; Kittel's Biblia Hebraica; Gesenius-Kautzsch's Hebrew Grammar; Brown, Driver, and Briggs' Lexicon. One hour a week.

3d. Translation into English of selections from Isaiah 1-39. Two hours a week.

3e. Translation into English of selections from Jeremiah, Ezekiel, and the Minor Prophets. Two hours a week.

3f. Hebrew prose composition. Davidson's Hebrew Syntax. One hour a week.

3g. History of the Western Orient from 722 B.C., to 330 B.C., with special attention to the history, literature and institutions of the Hebrews. One hour a week.

3h. Arabic First Course; Thatcher's Arabic Grammar with exercises in translating easy prose into English. Two hours a week.

4a. A literary study of the didactic and lyrical poetry of the Hebrews and of Paul's Epistles to the Corinthians. Two hours a week.

4b. Translation from English into Hebrew; characteristics of Hebrew poetry; Jewish history from the fall of Jerusalem (586 B.C.) to the end of the Maccabean period. Davidson's Hebrew Syntax. One hour a week.

4c. Translation into English of selected Psalms; Zechariah 1-8; Jonah; II. Chronicles 1-9; Kittel's Biblia Hebraica; Gesenius-Kautzsch's Hebrew Grammar; Brown, Driver and Briggs' Lexicon. One hour a week.

4d. Translation into English of selections from Job, Proverbs, and Ecclesiastes. One hour a week.

4e. Translation into English of Psalms not in 4c. One hour a week.

4f. Hebrew prose composition. Davidson's Hebrew Syntax. One hour a week.

4g. History of the Western Orient from 330 B.C. to 135 A.D., with special attention to the history and literature of the Jews, and the History of Mahomet to the Caliphate. Two hours a week.

4h. Arabic Second Course; Thatcher's Arabic Grammar *continued*; Brünnow's Chrestomathy of Arabic Prose Pieces; Harder's Arabic Chrestomathy. Two hours a week.

4i. Grammar of Palestinian Aramaic with translation of extracts from Baer and Delitzsch's Text of Daniel and Ezra; Marti, *Biblisch-Armaeische Grammatik*. Michaelmas Term. Two hours a week.—Syriac Grammar with translation of easy prose into English; Brockelmann's *Syrische Grammatik*; Roediger's *Chrestomathia Syriaca*. Easter term. Two hours a week.

4j. Elements of Assyrian; Prince's *Assyrian Primer*. Outlines of Comparative Grammar of the Semitic Languages; Brockelmann's *Vergleichende Grammatik*. One hour a week.

### Degree of M.A.

Candidates proceeding to the degree of M.A. must have graduated with honours in the department of Semitic Languages or in that of Greek and Hebrew, or must have completed at least three years' study of the Hebrew language in the University of Toronto or one of its federated universities or colleges with a minimum standing of 66 per cent. in their final year of such study.

### Courses for the degree of M.A.

The following courses of study are offered to qualified candidates for the degree of M.A. in Oriental Languages:

1. The Historical Geography of Palestine.
2. Hebrew archaeology.
3. The books of Kings.
  - (a) Reading of Massoretic text and study of the contents.
  - (b) A comparison of the text with that of Chronicles.
4. Translation into Hebrew of the first book of Maccabees in Greek.
5. Critical study of the Hebrew text of Hosea along with that of the Versions.
6. Selections from Roediger's *Chrestomathia Syriaca*.
7. A selection of Arabic prose pieces.
8. Selected easy Assyrian texts.
9. A course in the Wisdom literature of the Old Testament and Apocrypha, with selected Hebrew and Greek Texts. Lectures and Seminary.
10. A course in the development of the Aramaic dialects, with study of selected North-Semitic inscriptions and the Elephantine papyri.

### Degree of Doctor of Philosophy.

Courses leading to the degree of Ph.D. in either major or minor subjects will be open to students of proved capacity and intelligent interest in the work.

## MODERN LANGUAGES.

## ENGLISH.

## UNIVERSITY COLLEGE:

W. J. ALEXANDER, PH.D.....	<i>Professor.</i>
D. R. KEYS, M.A.....	<i>Associate Professor of Anglo-Saxon.</i>
M. W. WALLACE, PH.D.....	<i>Associate Professor</i>
G. S. STEVENSON, M.A., B.LITT.....	<i>Associate Professor.</i>
W. H. CLAWSON, PH.D.....	<i>Lecturer.</i>
MISS C. F. McLACHLAN, M.A.....	<i>Lecturer.</i>

## VICTORIA COLLEGE:

A. H. REYNAR, M.A., LL.D.....	<i>Professor Emeritus.</i>
O. P. EDGAR, B.A., PH.D.....	<i>Professor.</i>
L. E. HORNING, B.A., PH.D.....	<i>Professor.</i>
C. E. AUGER, B.A.....	<i>Associate Professor.</i>
C. W. STANLEY, B.A.....	<i>Lecturer.</i>

## TRINITY COLLEGE:

H. C. SIMPSON, M.A.....	<i>Professor.</i>
W. D. THOMAS, B.A.....	<i>Lecturer.</i>
MISS C. E. KÄMMERER, M.A.....	<i>Reader.</i>

## ST. MICHAEL'S COLLEGE:

REV. A. E. HURLEY.....	<i>Professor.</i>
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Composition: In the first two years of the undergraduate course original essays are required during the session from students taking the General and Honour Courses in English, even from those who have received dispensation from attendance upon lectures. These essays, after being carefully examined, are returned with suggestions and criticisms, and the marks assigned are reckoned in determining standing in the May examinations.

In the first and second years composition shall be regarded as a subject distinct from literature, and candidates failing to secure the necessary standing in these essays are required to repeat the work of the year in English composition.

Provision will be made by a special paper in English composition for the examination of those candidates for Senior Matriculation who are not in attendance, and who have not presented the essays required.

1a. (i) Composition: The writing of at least four original compositions during the session.

(ii) Familiarity with and intelligent appreciation of the following texts: Sir Patrick Spens, The Braes o' Yarrow, Waly, Waly; Gray, Spring, A Favourite Cat, Eton College; Goldsmith, The Traveller; Scott, Ride to

Melrose, Lochinvar, A Weary Lot, County Guy, Old Mortality; Keats, To Autumn, Eve of St. Agnes; Carlyle, The Hero as Prophet; George Eliot, Silas Marner; Browning, Among the Rocks, Confessions, Youth and Art, An Epistle; Ruskin, Crown of Wild Olive (Preface, Traffic, Work); Rossetti, My Sister's Sleep, The Blessed Damozel, The Portrait. (The poetical selections in this paragraph are contained in "Representative Poetry", Students Book Department, University of Toronto.)

Two hours a week.

2a. Composition: The writing of at least four original compositions during the session.

2b. Familiarity with and intelligent appreciation of the following texts: Shakespeare, Romeo and Juliet, Henry IV., Parts I. and II., Twelfth Night, Hamlet.

Two hours a week.

2c. (i) The history of the English drama to the time of Shakespeare. The following texts are to be carefully read: Noah's Flood, The Sacrifice of Isaac, Secunda Pastorum, Everyman (Pollard's "Miracle Plays"); Lyly, Endymion; Greene, Friar Bacon; Marlowe, Tamburlaine, Part I., Edward II.; Kyd, Spanish Tragedy; Shakespeare, Romeo and Juliet, Henry IV., Parts I. and II., Twelfth Night, Hamlet.

(ii) Elizabethan poetry with special study of the following: the selections from Wyatt to Dekker, inclusive, in Manly's "English Poetry" (Ginn & Co.), and Spenser's Faerie Quene, Book I.

Two hours a week.

3a. An outline of eighteenth century literature, with special study of the following texts: Dryden, Essay of Dramatic Poesy, Preface to the Fables; Swift, Gulliver's Travels, Books I. and II.; Addison, the selections from the essays in the Golden Treasury Series; Pope, Essay on Criticism; Johnson, Lives of Dryden, Addison, and Pope, Preface to Shakespeare; Goldsmith, She Stoops to Conquer, Vicar of Wakefield; the selections from Dryden to Burns, inclusive, in Manly's "English Poetry" (Ginn & Co.); the selections from Bunyan to "Junius", inclusive, in Manly's "English Prose" (Ginn & Co.), with the exception of those from Swift, Johnson, and Goldsmith. The writing of essays on subjects connected with the course in literature. Two hours a week.

3b. Seventeenth century literature with special study of the following texts: Milton, L'Allegro, Il Penseroso, Comus, Lycidas, Arcades, Sonnets, Paradise Lost, Paradise Regained, Samson Agonistes; selections from the poetry of Herrick and of Herbert; Milton, Of Reformation, The Reason of Church Government, Of Education, Areopagitica; Browne, Religio Medici; and the selections from Burton to Taylor, inclusive, in Manly's "English Prose". Two hours a week.

3c. Bright, Old English Grammar and selections from the Reader; Outlines of Old English literature. Two hours a week.

4a. Nineteenth century literature: Wordsworth, Michael, Lines composed above Tintern Abbey, Reverie of Poor Susan, Influence of Nature



Objects, "Three years she grew", The Green Linnet, The Solitary Reaper, Intimations of Immortality, To the Cuckoo, "She was a Phantom of Delight", "I wandered lonely as a cloud", Ode to Duty, To a Skylark ("Ethereal Minstrel"), Elegiac Stanzas, September 1819, The Primrose of the Rock, "It is a beauteous evening", Written in London September 1802, London 1802, "It is not to be thought of", To Sleep, After-Thought, Mutability, "Scorn not the sonnet", "A poet he hath put his heart", Preface to the Lyrical Ballads; Coleridge, The Ancient Mariner, Kubla Khan, France, Frost at Midnight, Dejection, Youth and Age; Scott, Marmion; Byron, Manfred, Vision of Judgment; Shelley, Adonais, Lines written among the Euganean Hills, Ode to the West Wind, An Indian Serenade, The Cloud, To a Skylark, The Question, To Night, "The world's great age", "One word is too often profaned", "When the lamp is shattered"; Keats, Eve of St. Agnes, The Eve of St. Mark, La Belle Dame sans Merci; Tennyson, Tithonus, Tiresias. The Revenge, Vastness; Robert Browning, The Bishop orders his Tomb, Saul, Love among the Ruins, Up at a Villa, A Grammarian's Funeral, Fra Lippo Lippi, Andrea del Sarto, Abt Vogler, Rabbi Ben Ezra, Caliban upon Setebos, Confessions, Prospice; Matthew Arnold, Morality, The Scholar Gipsy, Thyrsis, Dover Beach; D. G. Rossetti, The Blessed Damozel, The Portrait, Sister Helen; Carlyle, Characteristics, Signs of the Times; Ruskin, A Joy Forever. (All the poetical selections named in this paragraph are contained in a single volume, "British Poets of the Nineteenth Century", Benjamin H. Sanborn & Co., N.Y.) The writing of essays connected with the course in literature. Two hours a week.

4b. (i) Elizabethan prose with special study of the following texts: More, Utopia; Ascham, The Schoolmaster; Sidney, Apology for Poetry; Hooker, Ecclesiastical Polity, Book I.; Hakluyt, Voyages of Gilbert and Drake; and the selections from Tyndale to Dekker, inclusive, in Manly's "English Prose".

(ii) Shakespeare: King John, King Lear, Othello, Antony and Cleopatra, Coriolanus.

Two hours a week.

4c. (i) Beowulf, ll. 1250-1650 (ed. A. J. Wyatt). Historical English grammar.

(ii) Sweet, Second Middle English Primer; Chaucer, Second Nun's Tale, Man of Law's Tale.

Two hours a week.

4d. Newman, Apologia, The Idea of a University, Discourses V.-VIII.; J. S. Mill, Essays on Bentham, Coleridge, Civilization, Utilitarianism, chaps. I., II., Liberty, chaps. I., II.; Carlyle, Essay on Johnson, Past and Present, Book III., Shooting Niagara—and After?, Ruskin, Unto this Last; Arnold, Culture and Anarchy, Democracy, Equality, Huxley, Administrative Nihilism, Government: Anarchy or Regimentation. Two hours a week.

**Courses for M.A.**

The following courses are open to properly qualified graduate students. To be admitted as candidates for the degree of M.A., students must be honour graduates in English and History or in the Teutonic division of Moderns. They must be in attendance at the University and must devote an entire session to the work for the degree. They are required to take any three of the following courses and one other course to be approved.

1. *A Course in Anglo-Saxon Epic and Romance.* The early epic songs, Beowulf, the Christian epic, the Apollonius of Tyre. Two hours a week. Professor Keys.

2. *Studies in Middle English Romance.* Candidates are expected to possess accurate knowledge of the political and social history of the period; also of the development of Middle English Literature and its relation to the French and German literature of the time. Besides the regular works of reference on these subjects the following should be consulted: Giles, Six Old English Chronicles; Lady Guest, Mabinogion; Rhys, J., Studies in the Arthurian Legend; Evans, High History of the Holy Grail. The following works will be used for language study: Havelock the Dane (Skeat); King Horn (Hall); Selections from Emerson's Middle English Reader; Chaucer's Prologue, Knight's Tale, Sir Thopa, Squire's Tale; Malory, Morte d'Arthur; Selected Ballads. Two hours a week. Professor L. E. Horning.

3a. *Chaucer and his School.* Lectures on Chaucer's poetic development and literary influence. Reading of the following texts: Romaunt of the Rose, Book of the Duchesse, House of Fame, Parlement of Foules, Troilus and Criseyde, Prologue of the Legend of Good Women, and Legends of Cleopatra and Thisbe, The Canterbury Tales; Gregory Smith. Specimens of Middle Scots (Blackwood).

3b. *The English and Scottish Popular Ballads.* Lectures on origins, literary history, and poetic value. Reading of selected ballads from the one-volume edition of Child's collection by Sargent and Kittredge

Two hours a week. Dr. W. H. Clawson.

4. *Seventeenth Century Drama in France and England.* Two hours a week. Professor Edgar.

5. *English Literary Criticism in the Sixteenth and Seventeenth Centuries.* Thorough knowledge of the following texts is required: Elizabethan Critical Essays (ed. Gregory Smith, Clarendon Press); Critical Essays of the Seventeenth Century (ed. Spingarn, Clarendon Press); Essays of Dryden (ed. Kerr, Clarendon Press); Corneille, De l'Utilité et des parties du Poème Dramatique, De la Tragédie, Des Trois Unités; Boileau, L'Art Poétique (ed. Nichol Smith, Cambridge Univ. Press). For general reading, Spingarn, History of Literary Criticism in the Renaissance; Saintsbury, History of Literary Criticism, vol. 2. Two hours a week. Professor G. S. Stevenson.

6. *The English Novel in the Eighteenth and Nineteenth Centuries.* Two hours a week. Professor Keys.

**GERMAN.****UNIVERSITY COLLEGE:**

W. H. VAN DER SMISSEN, M.A., PH.D.....	<i>Professor Emeritus.</i>
G. H. NEEDLER, B.A., PH.D.....	<i>Associate Professor and Acting Head of the Department of German.</i>
P. W. MUELLER, B.A.....	<i>Associate Professor.</i>
P. TOEWS, M.A., PH.D.....	<i>Assistant Professor.</i>
G. KARTZKE, PH.D.....	<i>Lecturer.</i>
B. TAPPER, B.A.....	<i>Lecturer.</i>

**VICTORIA COLLEGE:**

L. E. HORNING, M.A., PH.D.....	<i>Professor.</i>
A. E. LANG, M.A.....	<i>Professor.</i>
MISS M. E. T. ADDISON, B.A.....	<i>Lecturer.</i>
FRANCIS OWEN, M.A.....	<i>Lecturer.</i>

**TRINITY COLLEGE:**

A. H. YOUNG, M.A.....	<i>Professor.</i>
P. M. I. M. REICH, PH.D.....	<i>Lecturer.</i>
D. DUFF, M.A., B.D.....	<i>Lecturer.</i>
MISS C. E. KÄMMERER, M.A.....	<i>Reader.</i>
G. E. HOLT, M.A. MUS. BAC.....	<i>Instructor.</i>

**ST. MICHAEL'S COLLEGE:**

REV. H. CARR, B.A.....	<i>Professor.</i>
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NOTE.—No candidate should join any class in German without previously satisfying the instructor as to his ability to profit by the instruction given.

1a. Grammar; dictation; translation at sight from easy modern German prose; translation from English into German: Hewett, German Reader (Macmillan). Four hours a week.

1b. Grammar; dictation; pronunciation; translation from English into German; translation at sight from modern German; Kahnmeyer und Schulze, Geschichte für Volks-und Bürgerschulen, pp. 1 to 58 (Velhagen und Klasing, Realienbuch, No. 5); Putzger, Historischer Schulatlas (Velhagen und Klasing); Holland, Germany to the Present Day, Chapters 1-3 inclusive (Murby); Heyse, L'Arrabbiata; Buchheim, Deutsche Lyrik, Poems by Arndt, Bürger, Chamisso, Eichendorff, Geibel, Anastasius Grün, Hauff, Kerner, Körner, Wilhelm Müller, Volkslieder. Two hours a week.

1c. Oral term work; simple narrative composition. One hour a week.

2a. Grammar; dictation; translation from English into German; translation at sight from modern German; Goethe and Schiller, Ausgewählte Balladen, ed. Heuwer (Schöningh); Manley and Allen, Four German Comedies; Heyse, Das Mädchen von Treppi; Zastrow, Wilhelm der Sieger. Four hours a week.

2b. Grammar; dictation; pronunciation; translation from English into German; translation at sight from modern German; Kahn Meyer and Schulze, *Geschichte für Volks- und Bürgerschulen*, pp. 58 to end (Velhagen und Klasing, Realienbuch, No. 5); Holland, Germany to the Present Day (Chapter 4 to end of book); Putzger, *Historischer Schulatlas*, (Velhagen und Klasing); *Die hundert besten Gedichte der deutschen Sprache* (Lyrik), ed. R. M. Meyer (Berlin: Weicher; London: Gowans and Gray); Keller, *Kleider machen Leute*; Lessing, *Minna von Barnhelm*. Two hours a week.

2c. Oral term work; simple narrative composition. One hour a week.

3a. Grammar; dictation; pronunciation; translation from English into German; translation at sight from modern German; outlines of the history of German literature from 1740; Fontane, *Vor dem Sturm* (Macmillan); *First Book of German Poetry*, ed. Rippmann (Dent); Freytag, *Die Journalisten*. Two hours a week.

3b. Grammar; translation at sight; Goethe, *Poems to 1775 in Twentieth Century Series*, Götz von Berlichingen, Werthers Leiden; Schiller, *Die Räuber*, *Kabale und Liebe*; typical selections from writers included in Freye's edition of "*Sturm und Drang*" (*Goldene Klassiker-Bibliothek*, 2 vols.). Two hours a week.

3c. Oral term work; translation from English into German; composition. Two hours a week.

4a. Grammar; dictation; pronunciation; translation from English into German; translation at sight from modern German; outlines of the history of German literature from 1740; Keller, *Zwei Novellen*, ed. Kip (Oxford University Press); Goethe, *Lyrische Gedichte*, ed. Heuwer (Schöningh); Schiller, *Wilhelm Tell*. Two hours a week.

4b. Grammar; translation at sight; a general acquaintance with the German literature of the nineteenth century; Goethe, *Faust*, Pt. I.; Schiller, *Die Braut von Messina*; Grillparzer, *Libussa*; Hebbel, *Herodes und Mariamne*; Sudermann, *Frau Sorge*; Hauptmann, *Der arme Heinrich*; *Dichter des 19. Jahrhunderts*, ed. Weicken (Schöningh), the poems by Freiligrath, Heine, Lenau, Geibel, Scheffel, Droste-Hülshoff, Fontane, Meyer, Storm, Liliencron, Falke. Two hours a week.

4c. Oral term work; translation into German; composition. One hour a week.

4d. Elements of Middle High German grammar; history of the German language; history of Middle High German literature; *Das Nibelungenlied* (ed. Bartsch, Schulausgabe), Avv. I., V., XVI., XXIX., XXXIX. One hour a week.

### Courses for M.A.

1. Historical Grammar of the German Language. Professor Horning.
2. The Modern German Drama. Professor A. E. Lang.
3. Literature of the Reformation Period. Professor Müller.
4. Goethe and English Literature. Professor Needler.
5. *Feine's* Life and Works. Professor Young.



**FRENCH.****UNIVERSITY COLLEGE:**

J. SQUAIR, B.A.....	<i>Professor.</i>
J. H. CAMERON, M.A.....	<i>Associate Professor.</i>
ST. E. DE CHAMP, B. ÈS L., O.A.....	<i>Associate Professor.</i>
J. S. WILL, B.A.....	<i>Associate Professor.</i>
F. C. A. JEANNERET, B.A.....	<i>Lecturer.</i>
P. BALBAUD.....	<i>Instructor.</i>
L. A. BIBET.....	<i>Instructor.</i>

**VICTORIA COLLEGE:**

VICTOR DE BEAUMONT, M.A.....	<i>Associate Professor.</i>
F. H. SNOW, A.B., PH.D.....	<i>Associate Professor.</i>
ST. E. DE CHAMP, B. ÈS L., O.A.....	<i>Lecturer.</i>

**TRINITY COLLEGE:**

R. E. L. KITTREDGE, M.A.....	<i>Professor.</i>
ANGELO LIPARI, M.A.....	<i>Lecturer.</i>

**ST. MICHAEL'S COLLEGE:**

REV. R. McBRADY.....	<i>Professor.</i>
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NOTE.—In order to be a member of any class in French a student must satisfy the instructor as to his ability to profit by the instruction given.

1a. Grammar, dictation, translation from English into French, translation at sight from modern French.

1b. Grammar, dictation, pronunciation, translation from English into French.

Molière, les Précieuses ridicules; Racine, *Athalie*; La Fontaine, *Fables*, VIII., ed. Clément (Colin); outlines of the history of French literature to the middle of the sixteenth century. Three hours a week.

Students are to read during the year two or three of the following books, or such other books as the instructor may approve: Labiche, *la Grammaire*, *le Voyage de Monsieur Perrichon*, *les Petits Oiseaux*, *la Poudre aux yeux*; Scribe, *Bertrand et Raton*, *le Verre d'eau*; Dumas, *les Trois Mousquetaires*; Lamartine, *Graziella*; Lamennais, *Paroles d'un croyant*; Hugo, *Bug Jargal*; Saintine, *Picciola*; Erckmann-Chatrian, *Madame Thérèse*, *l'Ami Fritz*; George Sand, *la Mare au Diable*, *la Petite Fadette*; Alphonse Daudet, *la Belle Nivernaise*, *le Petit Chose*, *Contes du lundi*, *Tartarin de Tarascon*; Jules Verne, *l'Île mystérieuse*, *les Enfants du Capitaine Grant*, *le Tour du monde en 80 jours*; About, *l'Homme à l'oreille cassée*; France, *le Crime de Sylvestre Bonnard*; Rambaud, *Petite Histoire de la civilisation française*. Essays in French on the books read will be required, and will count in the estimation of term work.

2a. Grammar; dictation; translation from English into French; translation at sight from modern French.

2b. Grammar; translation from English into French; translation at sight.

History of French literature from the middle of the sixteenth century to the end of the seventeenth century.

Pascal, ed. Warren (Heath), *Pensées*, Articles I., 1, 3, 6, III., 18, IV., 4, 5, V., 10, VI., 3, 23, 43 *bis*, 47, 56, VII., 25, XII., 1, XXIV., 5, XXV., 16, 17 *bis*; Bossuet, *Oraisons funèbres* (Henriette d'Angleterre); La Bruyère, *Caractères* (De la cour); Corneille, *le Cid*; Racine, *Phèdre*; Molière, *le Bourgeois gentilhomme*, *les Femmes savantes*; Boileau, *l'Art poétique*. Two hours a week.

2c. Oral work; simple narrative composition. One hour a week.

3a. Grammar; dictation; translation from English into French; translation at sight from modern French. Bossuet, *Oraisons funèbres* (Henriette d'Angleterre); Voltaire, *Zadig*; Chateaubriand, *Atala*; *Choix de contes contemporains* (Holt), the following extracts—*le Siège de Berlin*, *l'Enfant espion*, *la Vision du juge de Colmar*, *le Remplaçant*, *Mon Ami Meurtrier*, *la Saint-Nicolas*, *l'Oncle et le neveu*, *l'Album du régiment*, *le Chevalier double*, *Croisilles*. Two hours a week.

3b. Grammar; translation at sight; history of French literature during the eighteenth century.

The reading in this course, with critical study of selected texts, will include the following: Lesage, *Gil Blas*, ed. Cohn and Sanderson (Heath), pp. 1-103; Marivaux, *le Jeu de l'amour et du hasard*; Voltaire, *Zaire*, *la Henriade*, I., II., *Micromégas*; Rousseau (*Morceaux choisis* par Fallex, Delagrave, pp. 213-274); Diderot (*Extraits* par Fallex, Delagrave, *Salons*); Sedaine, *le Philosophe sans le savoir*; André Chénier (*Poésies choisies* par Becq de Fouquières, *Hymnes et Odes*); Chateaubriand, *le Dernier Abencérage*; Mme de Staël, *de l'Allemagne*, première partie.

History of French society and institutions in the eighteenth century.

3c. Composition; oral work; translation from English into French; translation at sight. One hour a week.

3d. Old French grammar; elements of French phonology; reading of typical passages from the *Chanson de Roland*. One hour a week.

4a. Grammar; dictation; translation from English into French; translation at sight from modern French. La Fontaine, *Fables*, VIII.; Racine, *Athalie*; Molière, *les Femmes savantes*; Hugo, *Hernani*; Augier, *la Pierre de touche*; Oxford Book of French Verse, extracts 268, 270, 274, 276, 278, 283, 284, 287, 293 to 317 inclusive. Two hours a week.

4b. Grammar; translation at sight; history of French literature during the nineteenth century.

The reading in this course, with critical study of selected texts, will include the following: Lamartine, *Premières Méditations* I.-XVI.; Hugo, *Poetry* (Edgar and Squair), pp. 23-73, *Notre-Dame de Paris*, Tome II., *Hernani*; Balzac, *Eugénie Grandet*; Augier, *le Gendre de Monsieur Poirier*;

Taine, *Nouveaux Essais de critique et d'histoire*, Balzac; Leconte de Lisle, *Poèmes barbares*, pp. 1-55, 166-217; *Quelques Contes des romanciers naturalistes*, ed. Dow and Skinner (Heath), pp. 1-91, 99-155.

History of French society and institutions in the nineteenth century.

4c. Oral work; composition; translation from English into French; translation at sight from French authors of any period. One hour a week.

4d. History of the French language. One hour a week.

### Graduate Courses.

Candidates for the higher degrees will be required to plan their course under the direction of the department.

The following courses are open to properly qualified graduate students:

1. Old French Drama. Three hours a week. Professor Will.

2. Old French Texts (Michaelmas term). Mediæval French Literature (Easter term). One hour and a half, weekly. Professor V. de Beaumont.

3. Old Provençal. Phonology, morphology, and versification; reading of texts in prose and verse. Two hours a week. Professor Snow.

4. Social Forces in Modern French Literature. Two hours a week. Professor Will.

5. The French Novel of the Seventeenth Century. One hour a week. Professor Cameron.

6. The Philosophies of the Eighteenth Century. One hour a week. Professor Squair. (Not given in 1914-1915.)

7. The History of Prose Fiction in France, with special reference to the Eighteenth and Nineteenth Centuries. Two hours a week. Professor Kittredge.

8. Contemporary French Literature. Study of the literary and critical movements since 1850. One hour a week. Professor M. de Champ.

### ITALIAN AND SPANISH.

W. H. FRASER, M.A. .... *Professor.*

M. A. BUCHANAN, B.A., PH.D. .... *Associate Professor.*

G. T. NORTHUP, B.A., PH.D. .... *Assistant Professor.*

W. H. F. NICCOLA DI PIETRO, LITT.D. .... *Instructor.*

#### Italian.

1a. Grammar; pronunciation, dictation and phonetic transcription; translation from English into Italian; translation from the prescribed text. Text-books: De Amicis, *Cuore* (Holt & Co. ed.), translation of *I Racconti Mensili*; Grandgent, *Italian Grammar*. Two hours a week.

1b. De Amicis, *Cuore*; oral exercises in Italian. One hour a week.

2a. Grammar; dictation and phonetic transcription; translation from English into Italian; translation at sight from modern Italian. Text-books: Grandgent, *Italian Grammar*; Grandgent, *Italian Composition*; *Italian Short Stories* (ed. Wilkins and Altrocchi). Two hours a week.

2b. Simple narrative composition in Italian and oral exercises; Gherardi del Testa, *L'Oro e l'Orpello* (ed. Thurber). One hour a week.

3a. Dante, *Vita Nuova* (ed. Scherillo, Hoepli, Milano); Petrarca, pp. 248-250, 253-255, 257-260, 262-278 in Torraca, *Manuale della Letteratura Italiana*, Vol. I.; Boccaccio, pp. 352-363 and 371-373 in Torraca, Vol. I. One hour a week.

3b. *Giacosa*, *Come le Foglie*; Manzoni, *I Promessi Sposi* (Chaps. 1-20 in Silver, Burdett & Co. ed.); grammar; translation at sight from modern Italian; translation from English into Italian; outline of the history of Italian Literature to Boiardo, as in Garnett, *History of Italian Literature*. One hour a week.

3c. Free composition in Italian and oral exercises. One hour a week.

3d. History of Italian literature to Boiardo; lectures, with the reading of illustrative selections from Torraca, Vol. I. One hour a week.

4a. Dante, *Divina Commedia* (ed. Torraca): *Inferno*, cantos 1-9, 32-34; *Purgatorio*, cantos 1-4, 33; *Paradiso*, cantos 15, 31-33. One hour a week.

4b. Ariosto, pp. 18-26, 28-32, 76, 77, 86-90, 103-106, in Torraca, Vol. II.; Tasso, pp. 144-159, 173-175, 190-194 in Torraca, Vol. II.; Manzoni, *I Promessi Sposi*, Chap. 21 to end (Silver, Burdett & Co. ed.); grammar; translation at sight; outlines of the history of literature from Ariosto to the present time, as in Garnett, *History of Italian Literature*. One hour a week.

4c. History of Italian literature from Ariosto to the present time; lectures, with the reading of illustrative selections from Torraca, Vols. II. and III., and other works. One hour a week.

4d. Oral exercises: practice in speaking Italian, and discussion in Italian of assigned topics. One hour a week.

### Spanish.

1a. Grammar; pronunciation; dictation and phonetic transcription; translation from English into Spanish; translation from the prescribed text. Text-books: Wagner, *Spanish Grammar*; Bransby, *Spanish Reader*. Two hours a week.

1b. *Gil Blas* (Heath & Co. ed.); oral exercises in Spanish. One hour a week.

2a. Grammar; dictation and phonetic transcription; translation from English into Spanish; translation at sight from modern Spanish. Text-books: Coester, *A Spanish Grammar*; Crawford, *Spanish Composition*; Hills, *Spanish Tales*. Two hours a week.

2b. Simple narrative composition in Spanish and oral exercises; Selections from the *Oxford Book of Spanish Verse*. One hour a week.

3a. Moratín, *El sí de las niñas*; Espronceda, *El estudiante de Salamanca*; Alarcón, *El Capitán Veneno*; Selections from the *Oxford Book of Spanish Verse*. Two hours a week.



3b. Selections from Mesonero Romanos; Quintero Hermanos, *Las de Caín*; grammar; translation at sight from modern Spanish; translation from English into Spanish; outlines of the history of Spanish literature of the nineteenth century. One hour a week.

3c. Free composition in Spanish and oral exercises. One hour a week.

4a. Lope de Vega, *La moza de cántaro* (ed. Stathers); Calderón, *La Vida es Sueño* (ed. Buchanan); Cervantes, *Cinco novelas ejemplares* (ed. Bibliotheca Romanica); Alarcón, *El Sombrero de tres Picos* (ed. Bourland); grammar; translation at sight. Two hours a week.

4b. Selections from Mesonero Romanos; Espronceda, *El estudiante de Salamanca*; selections from the Oxford Book of Spanish Verse. History of Spanish literature of the nineteenth century, together with the history of the drama from its beginnings. Two hours a week.

### Phonetics.

Elementary physiological phonetics, with practical exercises in the sounds of the modern languages studied. Text-book: Passy, *Petite Phonétique comparée*. One hour a week in the Second and Third Years of the Modern Language Course.

### Graduate Courses.

The following courses are offered for students proceeding to the degree of M.A.:—

1. (a) Italian Philology, one hour a week, Professor Fraser; or (b) Spanish Philology, one hour a week. Professor Northup.

2. Methods of research, bibliography (Michaelmas term), one hour a week, and either (a) The Italian *novella* (Easter term), or (b) Romanticism in Spain (Easter term), one hour a week. Professor Buchanan.

3. (a) Provençal (Michaelmas term), and (b) Provençal influence on the Italian lyric of the thirteenth century (Easter term), one hour a week. Dr. di Pietro.

4. Critical study of the following texts: (a) Dante, *La Divina Commedia* (ed. Torraca), *Inferno*, *Purgatorio* (cantos 1-15); Castiglione, *Il Cortegiano* (ed. Cian); Leopardi, *Le poesie complete* (ed. Foresi), or (b) *Poema del Cid* (ed. Menéndez Pidal); Cervantes, *Don Quijote*, Part I. (ed. Rodríguez Marín); Espronceda, *Obras poéticas y escritos en prosa*.

Candidates who have not studied both Italian and Spanish will be required to take the first two years of undergraduate work in the alternative language.

Courses leading to the degree of Ph.D. will be arranged on application.

# HISTORY.

GEORGE M. WRONG, M.A.....	<i>Professor.</i>
EDWARD J. KYLIE, M.A.....	<i>Associate Professor.</i>
A. GRANT BROWN, M.A.....	<i>Lecturer.</i>
R. HODDER WILLIAMS, B.A.....	<i>Lecturer.</i>
GEORGE M. SMITH, B.A.....	<i>Lecturer.</i>
C. V. MASSEY, B.A.....	<i>Special Lecturer.</i>
W. STEWART WALLACE, B.A.....	<i>Special Lecturer.</i>
MISS H. MCMURCHIE, B.A.....	<i>Instructor</i>

1. The history of Canada to 1763.

2a. The history of (1) Canada since 1763; (2) the United States since 1763.

2b. The political history of England from 1485 to 1603.

2c. The constitutional history of England to 1485.

3a. The history of France, Italy, and the Nearer East from 1763 to the present day.

3b. The political history of England from 1603 to 1763.

3c. The constitutional history of England from 1485 to 1763.

3d. The British Constitution and its development.

4a. The history of Britain and of the German peoples from 1763 to the present day; the problems of geography, race, etc., in history.

4b. The political history of England since 1763. (Students taking the Special Course in Political Science must show a knowledge of the constitutional history of England during the same period.)

4c. The constitutional history of Canada.

5. Essays on prescribed topics.

6. Subjects for reading during the long vacation will be prescribed to honour students of the Second, Third, and Fourth Years, and examinations on these subjects will be held in the first week of October.

All students in the honour course in Modern History who aim to secure first class honours must select in their Second Year under the direction of the Professor of History a subject for an historical essay, and must present the essay before the end of the Christmas term in their Fourth Year

In the Third and Fourth Years a review of the work of the previous year or years will be required.

7. The history of England from the meeting of the Long Parliament to the Restoration of Charles II. to be studied with special reference to the documents, letters and memoirs of the time.

8. Aristotle: Politics, and Hobbes: Leviathan.

## FIRST YEAR:

1. Marco Polo's Travels (in Everyman's Library); Fiske, Discovery of America; The Northmen, Columbus and Cabot, Early English and French Voyages, Voyages of Samuel de Champlain (in Original Narratives of Early American History, Ed.—Jameson); The Jesuit Relations and Allied Documents (Ed.—Thwaites) [Selections]; Hennepin, A New Discovery; La Houtan, A Voyage to North America; The Works of Francis Parkman.

## SECOND YEAR:

- 2a. *Canada*: Egerton, History of Canada; Bradley, Making of Canada; Lord Durham's Report; Shortt, Lord Sydenham; Pope, Sir John A. Macdonald; Willison, Sir Wilfrid Laurier and the Liberal Party; Burpee, Search for the Western Sea.  
*The United States*: Goldwin Smith, The United States; Trevelyan, The American War of Independence; Oliver, Life of Alexander Hamilton; Henderson, Stonewall Jackson; Paxson, The American Civil War.
- 2b. Fisher, English Political History, 1485-1547; Pollard, English Political History, 1547-1603; Gardiner, Henry VII.; Pollard, Henry VIII.; Creighton, Elizabeth; Froude, Elizabethan Seamen; Denton, England in the Fifteenth Century; More, Utopia; The Paston Letters.
- 2c. Adams & Stephens, Charters; McKechnie, Magna Carta; Maitland, Constitutional History; Stubbs, Constitutional History of England.

## THIRD YEAR.

- 3a. *France*: Histories:—Aulard, Taine and Michelet for the French Revolution; Cambridge Modern History; Alison Phillips, Modern Europe.  
Biography:—Morley, Lives of Voltaire and Rousseau; Stephens, Life of Turgot; Willert, Mirabeau; Belloc, Danton; Fournier, Napoleon I. or Rose, Napoleon I.  
General:—Acton, Lectures on the French Revolution; Rocquain, L'Esprit Révolutionnaire avant la Révolution; or Aubertin, Le Dix-Huitième Siècle; or De Tocqueville, L'ancien Régime et la Révolution; Lecky, History of England in the Eighteenth Century, Vol. V.; Fisher, Bonapartism; Fisher, The Republican Tradition in Europe; Vandal, l'Avénement de Bonaparte, Rosebery, Napoleon—the Last Phase.  
*Italy*: Bolton King, History of Italian Unity; Nielsen, History of the Papacy in the nineteenth century; Johnson, The Napoleonic Empire in Southern Italy; Bolton King, Mazzini (Everyman's Library); Cesaresco, Cavour; G. M. Trevelyan, Garibaldi.

- 3b. Trevelyan, England under the Stuarts; Macaulay, History of England; Lecky, History of England in the Eighteenth Century; Firth, Cromwell; Milton, Areopagitica; Morley, Walpole; Basil Williams, Life of Chatham.
- 3c. Maitland, Constitutional History; Prothero, Select Statutes; Gardiner, Documents Illustrative of the Puritan Revolution; Grant Robertson, Select Statutes, Cases and Documents.
- 3d. The British Constitution. Bagehot, The English Constitution; Raleigh, Elementary Politics. Reference should also be made to Maitland, Constitutional History of England; Lowell, Government of England; Dicey, Law and Custom of the Constitution; Marriott, English Political Institutions.

#### FOURTH YEAR:

- 4a. *England*: Lecky, England in the Eighteenth Century; Trevelyan, George III. and Charles James Fox; Rosebery, Pitt; Morley, Life of Cobden; Morley, Life of Gladstone; Disraeli, Sybil and Coningsby.  
*Germany*: Carlyle, Frederick the Great; Seeley, Life and Times of Stein; Von Sybel, The Founding of the German Empire; Headlam, Bismarck; Henderson, Short History of Germany.
- 4b. The Correspondence of Lord Chatham; The correspondence of George III. and Lord North; Russell, Memorials of Charles James Fox; The Greville papers; Parker, Life and Letters of Sir Robert Peel; Monypenny, Life of Disraeli.
- 4c. The Constitutional History of Canada. Ashley, Lectures in the Earlier Constitutional History of Canada; Egerton, Canada (Historical Geography of the British Colonies, Vol. V., Part II.), *or* Bourinot, Constitutional History of Canada; Houston, Canadian Constitutional Documents. Books for Reference: Parkman, The Old Régime in Canada; Munro, The Seigniorial System in Canada and Documents Relating to Seigniorial Tenure in Canada (Introduction); Egerton and Grant, Canadian Constitutional Development; Shortt and Doughty, Documents Relating to the Constitutional History of Canada; Lord Durham, Report on Canada; Shortt, Lord Sydenham (Makers of Canada Series); McEvoy, The Ontario Townships (University of Toronto Studies in Political Science, first series, No. 1).
- 6. (1) Clarendon, History of the Rebellion. Books III.-XI.  
(2) Baillie's Letters (Laing ed.) vol. I., pp. 271-400; vol. II., pp. 42-417.  
(3) Cromwell's Letters and Speeches (Carlyle ed.).  
(4) The Clarke Papers (C. H. Firth ed.).  
(5) Ludlow's Memoirs (to the death of Cromwell).  
(6) Gardiner, Constitutional Documents of the Puritan Revolution.



**POLITICAL ECONOMY.**

JAMES MAVOR, PH.D.....	<i>Professor.</i>
G. I. H. LLOYD, M.A.....	<i>Associate Professor.</i>
S. A. CUDMORE, B.A.....	<i>Lecturer.</i>
GILBERT E. JACKSON, B.A.....	<i>Lecturer.</i>
J. D. FALCONBRIDGE, M.A., LL.B.....	<i>Lecturer in Commercial Law.</i>

1. (a) Term essays with (b) examinations to be held in January before the opening of the term.

Second Year: The first essay in the Second Year shall be a topographical and economic account of the student's home town, city, county or district. A printed outline indicating the plan to be followed may be obtained from the Registrar. This essay shall be due on the second Wednesday in November. The other essays are on subjects to be prescribed during the session.

Third Year: The subjects are to be selected after consultation with the Professor on topics connected with the History of Economic Theory.

Fourth Year: The essays are to be on subjects connected with the work of the year, and are to be arranged after consultation with the staff.

**First Year.**

2. Economic Geography. The course consists of an account of Physical Geography in its economic aspects, the natural resources of the chief countries, ways and communications, ancient and modern trade routes, together with an account of the more important economic changes of modern times. Books recommended: Newbiggin, *Modern Geography*; Lyde, *Short Commercial Geography*; Gregory, Keller and Bishop, *Physical and Commercial Geography*; Adam, *Commercial Geography*; Chisholm, *Commercial Geography*; Consular Reports, Great Britain and United States. One hour a week.

**Second Year.**

3. General introduction to the study of Political Economy. Taussig, *Principles of Economics*, will be used as a text-book in the first term. The following works will also be found useful: Marshall, *Economics of Industry*; Chapman, *Political Economy*; Hobson, *Economics of Distribution*; Seligman, *Economic Interpretation of History*; Adam Smith, *Wealth of Nations*; Townsend Warner, *Landmarks of English Industrial History*; Day, *History of Commerce*. Fifty hours.

4. Canadian Economic History: An account of the economical organization of Society under the French régime. The development of agriculture, transportation, industry and commerce since 1763. Books recommended: Munro, *The Seigneurial System in Canada*; Munro, *Documents relating to Seigneurial Tenure in Canada*; Reports of General Murray, Colonel Burton, and General Gage on Quebec, Three Rivers and Montreal; Shortt

and Doughty, Constitutional Documents relating to Canada (1759-1791); Mavor, Economic History of Canada; Archives of Canada and of Ontario; county histories. Twenty-five hours.

5. Descriptive Canadian Economics: An account of the exploitation of the natural resources and of the principal industries and industrial centres of Canada. Books recommended: British Association Handbook of Canada, 1897; De Wavrin, *Le Canada Economique*, au Vingtième siècle; Mavor, Report on North-West of Canada; Gérin, *L'habitant de Saint-Justin*; Métin, *La Colombie Britannique*; McLean, the St. Lawrence Route, Rail way Rate Regulation in Canada; Hopkins, Canada, an Encyclopædia; Hopkins, Canadian Annual Review; Proceedings of the 40th Convention of the Canadian Manufacturers' Association; Porritt, the Revolt against the New Feudalism; Canada Year Book. Twenty-five hours.

6. Economic History and Theory with special reference to the eighteenth and nineteenth centuries. Books recommended for study: Seeley, Expansion of England; Gibbins, Industry in England; Rand, Economic History since 1763; Toynbee, Industrial Revolution; Webb, History of Trade Unionism in England; Hobson, Evolution of Modern Capitalism. Twenty-five hours.

### Third Year.

7. History of Economic Theory. The following books are recommended. Original authors: Mun, England's Treasure by Foreign Trade; Turgot, Reflections on the Formation and the Distribution of Riches; Adam Smith, Wealth of Nations, ed. Nicholson; Ricardo's Works, ed. Gonner; Ingram, History of Political Economy; Haney, History of Economic Thought; Ashley, Economic History, Part I. Chap. 3, Part II. Chap. 6; Sewall, Theory of Value before Adam Smith (Publications of American Economic Association, 1901); Bonar, Philosophy and Political Economy; Nys, Researches in the History of Economics; Gide et Rist, *Histoire des doctrines économiques*. Thirty-seven hours.

8. Criticism of current economic theories of value, interest, rent and wages. The principal text-book will be Taussig, Principles of Economics. The following books will also be used for reference: J. S. Mill, Principles of Political Economy; Marshall, Principles of Economics; Böhm-Bawerk, Capital and Interest, and the Positive Theory of Capital (transl. Smart); Wieser, Natural Value; Smart, Introduction to the Theory of Value; Nicholson, Principles of Economics; Keynes, Scope and Method of Political Economy, Chaps. 1-3, 7, 9; Hobson, Economics of Distribution; J. B. Clark, Distribution of Wealth; Pierson, Principles of Economics. Thirty-seven hours.

9. International Trade: The theory of international trade, history of modern customs tariffs, description of current methods in international commerce. Books recommended: Bastable, Theory of International Trade, and Commerce of Nations; Taussig, Tariff History of the U.S.; Maclean, Tariff History of Canada; Porritt, Sixty Years of Protection in

Canada; Rabbeno, American Commercial Policy; Fuchs, The Trade Policy of Great Britain; Ashley, Modern Tariff History. Thirteen hours.

10. Foreign Exchange: The principles and practice of foreign exchange; the movements of credits. Books recommended: Goschen, Theory of Foreign Exchanges; Clare, A, B, C of the Foreign Exchange. Five hours.

11. Money: Functions of money, standard money, legal tender, Gresham's law, quantity theory, bimetallism, monetary systems and policies of the leading countries. Book recommended: Bagehot, Lombard Street; Jevons, Money and the Mechanism of Exchange; Nicholson, Banker's Money; Price, L. L., Money and Prices; Nicholson, Money and Monetary Problems; Withers, The Meaning of Money; Nelson, A, B, C of Wall Street; Kinley, Money; Hull (edit.), Practical Problems in Banking and Currency; Noyes, Forty Years of American Finance; Layton, Introduction to the History of Prices. Thirteen hours.

12. Money: Advanced course (primarily intended for students in the graduating department of Commerce and Finance). Books recommended: Laughlin, Principles of Money; Irving Fisher, Purchasing Power of Money. Twelve hours.

13. Statistics: An outline of the history of statistics, methods of statistical analysis and study of statistical problems. Text-books and works of reference are: Bowley, Introductory Manual of Statistics; Meitzen, History, Theory and Technique of Statistics (supp. vol. to Annals of American Academy of Political and Social Science, Philadelphia, 1891); Census Reports, Canada, Great Britain, and U.S.A.; Canada Year Book. Thirteen hours.

14. Statistics: Advanced course (primarily intended for students in the graduating department of Commerce and Finance). Bowley, Elements of Statistics. See also article, "Statistics", in Encyclopædia Britannica; the Statesman's Year Book; Block, *Traité théorique et pratique de Statistique*; Georg von Mayr, *Statistik und Gesellschaftslehre*; publications of Royal Statistical Society; publications of the American Statistical Association; reports of Ontario Bureau of Industries; Statistical Abstract for the United Kingdom; Labour Gazette (Ottawa). Thirteen hours.

15. Economic history from the early Middle Ages down to 1776. Books recommended: Ashley, Economic History, Parts I., II.; Seebohm, English Village Community; Meredith, Economic History of England; Unwin, Industrial Organization in the Sixteenth and Seventeenth Centuries; Mavor, Economic History of Russia; Vinogradoff, The Growth of the Manor; Vinogradoff, Villenage in England; Gomme, The Village Community; Gross, Gild Merchant, Chaps. 1-4; Rogers, Six Centuries of Work and Wages, Chaps. 1-6, 8-10; Cunningham, Growth of English Industry and Commerce. Twenty-five hours.

16. A general sketch of economic history and of economic theory up till 1776. Books recommended: Adam Smith, Wealth of Nations; Gibbins, Industry in England. Fifty hours.

**Fourth Year.**

17. Economic history from 1776 till the present time. Books recommended: Cunningham, Growth of English Industry and Commerce in Modern Times, Part II.; Marshall, Principles of Economics, Appendix A; Jevons, The State in Relation to Labour; Baines, Ure, and other histories of special industries; Mantoux, La Révolution Industrielle; Toynbee, Industrial Revolution; D. A. Wells, Recent Economic Changes; Ely, Labour Movement in America, Chaps. 3, 4; Webb, History of Trade Unionism; Poor Law Commission Reports; Porter, Progress of the Nation; Assigned Speeches of Pitt, Huskisson, Peel, Gladstone, etc. Twenty-five hours.

18. Recent Economic Development. Books recommended: Hobson, Evolution of Modern Capitalism; Layton, Introduction to the History of Prices; Wells, Recent Economic Development. The following official reports should also be consulted: Canada, Census of 1911; U.S. Census Reports; Reports of Industrial Commission and Commission on Immigration; Great Britain, Reports of Royal Commissions on Labour, Depression of Trade and Industry, Shipping Rings and the Poor Laws. Thirteen hours.

19. Labour Problems: An account of the rise of trade unionism in England and America and a comparison of the labour legislation of leading countries. Books recommended: Webb, Industrial Democracy; Ely, The Labour Movement in America; Clark, The Labour Movement in Australasia; Seager, Social Insurance; Annual Reports and Bi-monthly Bulletins of the U.S. Bureau of Labour; Board of Trade Labour Gazette (English); The Labour Gazette (Canadian).

20. Transportation: An account of ocean and land transportation and its bearing upon commercial and industrial development. Railway policy, its history in Europe and America, railway rates, etc. Books recommended: Hadley, Railway Transportation; Mavor, English Railway Rates; Acworth, Elements of Railway Economics; Williams, Economics of Railway Transport; H. R. Meyer, Government Regulations of Railway Rates; Ripley, Railway Problems (assigned portions); McLean, Governmental Regulation of Railways in the United States; McLean, The St. Lawrence Route (Railway Age). Thirteen hours.

21. Transportation: Advanced course (primarily intended for students in the graduating department of Commerce and Finance); the technique of railway rate making, the finances and administration of railways, marine transportation, docks. Books recommended as in preceding section, together with Johnson, Ocean and Inland Transportation. Twelve hours.

22. Banking: Nature and functions of a bank, management of the reserve, clearing house system, commercial banks and savings banks, clearing house system, trust companies, comparative study of banking policy. Books recommended: Dunbar, Theory and History of Banking; Bagehot, Lombard Street; Conant, Modern Banks of Issue; Conant, The Principles



of Money and Banking, Vol. II.; Johnson, Report on the Canadian Banking System; Bisschop, Rise of the London Money Market. Thirteen hours.

23. Banking: Advanced course (primarily intended for students in the graduating department of Commerce and Finance). Books recommended: Publications of the National Monetary Commission (U.S.). Twelve hours.

24. Corporation Finance: Economic services of corporations, capitalisation, stocks and bonds, problems of management, corporation reports, method of control, public policy in regard to corporations, speculation, the stock and produce exchanges. Books recommended: Withers, H., Stocks and Shares; Duguid, The Stock Exchange; Emery, Speculation on the Stock and Produce Exchanges of the United States; Greene, Corporation Finance; Ripley, Trusts, Pools and Corporations (assigned portions); Reports of the U.S. Industrial Commission, Vols. I., XIII., XIX.; Pratt, The Work of Wall Street; Meade, Corporation Finance. Thirteen hours.

25. Public Finance: National and local finance, history of financial science, public debts and the policy of national and local governments in relation to their issue, administration and redemption; administration of the public domain—lands, forests, minerals. Books recommended: Bastable, Public Finance; Leroy-Beaulieu, Science des Finances, Livre II., Chaps. 4, 5, 9, 10; Plehn, Public Finance; Cohn, The Science of Finance; Seligman, Essays on Taxation. Twenty-five hours.

26. Theory of Taxation: Principles of taxation; incidence of taxation; progressive taxation. Books recommended: Seligman, The Incidence of Taxation; Seligman, Progressive Taxation (American Econ. Assn., 1909). Five hours.

27. Revenue Systems of Modern States: Revenue systems of Great Britain, Germany, France, United States and Canada. Federal, provincial and municipal revenues. Methods of taxation of land, and of individuals and corporations. Books recommended: Official reports of taxing authorities in the various countries; Grice, J. W., National and Local Finance; Seligman, The Income Tax; Kennan, Income Taxation; Plehn, The Property Tax in California; Mavor, Taxation of Banks in Canada and Taxation of Corporations in Canada (State and Local Taxation Conference 1908). Thirteen hours.

28. History and Criticism of Political Theories. Books recommended: Sidgwick, Elements of Politics; Pollock, History of the Science of Politics; Bonar, Philosophy and Political Economy; Ritchie, Principles of State Interference; Seeley, Introduction to Political Science; Mackenzie, Introduction to Social Philosophy; Barker, Political Thought of Plato and Aristotle. Twenty-five hours.

29. Comparative Politics: An account of the contemporary political systems of modern nations, especially Great Britain, the self-governing Dominions, and the Dependencies; Germany, France and the United States. The political institutions, methods of election of representatives and political parties of these countries, contemporary projects of change—direct legislation, the referendum, proportional representation, etc. Liter-

ature: Lowell, *The Government of England*; Lowell, *Governments and Parties in Continental Europe*; Bodley, *France*; Howard, *The German Empire*; Bryce, *American Commonwealth*; Cromer, *Ancient and Modern Imperialism*; Jebb, *Colonial Nationalism*. Twelve hours.

30. Public Administration: A comparative account of methods of central and local administration, professional and non-professional methods, departmental administration. "Good government" movements in various countries. Books recommended: Lowell, *The Government of England*; Redlich and Hirst, *Local Government in England*; English Citizen Series, (Macmillan); Reports of conferences on Good City Government. Thirteen hours.

31. A general sketch of economic theory and of economic history since 1776. Books recommended: *Economic Theory*, Marshall, *Economics of Industry*; Chapman, *Outlines of Political Economy*; Carver, *Distribution of Wealth*; Smart, *Distribution of Income*; *Economic History*, Adam Smith, *Wealth of Nations*; Gibbins, *Industry in England* will be used as a text-book.

32. Social Problems: A post-graduate class held by Professor Mavor for candidates for the degrees of M.A. and Ph.D. in subjects selected by them.

33. Commercial Law: General principles of the law of contracts. Rules relating to parties to contract; agency, partnership and companies. General view of the following: sale of goods, negotiable instruments, powers of banks, relation of banker and customer, insurance, carriage of goods, suretyship and guarantee, bills of sale and chattel mortgages, insolvency and assignments for the benefit of creditors. Text-book: Stevens, *Elements of Mercantile Law* (5 ed. 1911 by H. Jacobs). A larger book of a general character is Smith, *Mercantile Law*. The lecturer will if desired refer students to special works on any of the foregoing topics. Twenty-five hours.

34. Commercial Law: A second course, an extension of Course 33.

## INTERNATIONAL LAW, CONSTITUTIONAL LAW.

MCGREGOR YOUNG, M.A., K.C. .... Professor.

1. A course in Public International Law. The fundamental principles are discussed and current questions are examined by way of illustration. The text-books are: Hall, Lawrence, Walker. Books of reference: Kent, Wharton's Digest, Wheaton (Boyd's Ed.), Oppenheim, Westlake, Taylor, and the Encyclopædia of English Law.

2. A course in Federal Constitutional Law. The lectures deal with the essential features of federal government in a comparative view of the leading federal States. Special attention is given to the constitution of Canada, Australia, South Africa, and the United States. Text-books: Clement, *Constitution of Canada*; Lefroy, *Legislative Power in Canada*; Houston, *Constitutional Documents*; Bryce, *American Commonwealth*;

Woodrow Wilson, Congressional Government. Books for reference: Cartwright, Cases on the B.N.A. Act; Todd, Parliamentary Government in the Colonies, p. 318 to the end; Miller, Story, on the Constitution of the United States; Cooley, Principles of Constitutional Law.

3. A course in English Constitutional Law, in which the distinctive features of the English Constitution, the two Houses of Parliament, the Cabinet and its relation to the Crown and Parliament, the prerogatives, the conventions, the courts, and the position of the subject under English law, are the principal topics. Text-books: Dicey, Law of the Constitution; Anson, Law and Custom of the Constitution; Selected Statutes and Decisions. Books for reference: Lowell, Government of England; Low, Governance of England; Traill, Central Government; Bagehot, English Constitution; Broom, Constitutional Law; Burgess, Political Science, and Constitutional Law.

4. A course in Colonial Constitutional Law, in which the lectures deal with the various forms of colonial government with special reference to the self-governing colonies and to current problems. Text-books: Todd, Parliamentary Government in the Colonies (to page 318); Tarring, Law in Relation to the Colonies; Jenkyns, British Rule and Jurisdiction beyond the Seas; designated portions of modern treatises.

### LAW.

A. H. F. LEFROY, K.C., M.A. .... *Professor.*

1. English Law before the Norman Conquest; the Saxon invasions; the changes effected in the law, especially of real property, by the Conqueror and his successors; the introduction or extension of the feudal system; the great changes effected by the legislation of Henry II., Edward I. and Edward III.; the creation of entailed estates; the struggle to obtain power to alienate them; legislation to restrict alienations in mortmain; the evasion of the law; "Uses" and the rise of the Court of Chancery; the Act giving power to devise lands; the legislation of Elizabeth to prevent frauds upon creditors and purchasers; the abolition of feudal tenures by Charles II.; the struggle between the Court of Chancery and the Common Law Courts in the reign of James I.; the efforts in the reign of George III. and subsequently to ameliorate the criminal law; the reforms in procedure in the last century in England; and the English Statutes after 1792 that have their counterpart in our Colonial legislation are discussed and explained. For reference: Pollock and Maitland, History of English Law (first part); Storry-Dean's, Student's Legal History; Holdsworth, History of English Law; Jenks' Short History of English Law; a collection of English Statutes, and the Revised Statutes of Canada, and of Ontario.

2. The lectures on Roman private law comprise a sketch of the customary law of the regal period at Rome and the history of the law from the time of the decemviri to the death of Justinian, giving an account of the growth of the unwritten law, the prætor's edict, the formulary system, the

*jus gentium*, and the *jus naturae*; with an account of the legislation during the Republic and under the Empire and of the several attempts to form a code, finally terminating in the works of Justinian. A number of lectures are devoted to the substance of Roman law in the time of Justinian. The law of testamentary succession, the various kinds of wills, the duties of the heir, the gift of legacies, trust gifts, and the law of contracts and delicts are explained, and also the remedial processes for the protection and enforcement of rights, including the *legis actiones*, the changes effected by the formulary system, the summary jurisdiction of the prætor, the abolition of the formulary system, and the *extraordinaria cognitio*. For reference: Muirhead, Historical Introduction to the Private Law of Rome; Sandar's Justinian; Walton, Introduction to Roman Law; Sohm, Institutes of Roman Law (Ledlie's translation); Leage's Roman Private Law; Radford-Pott's Gaius; Article on "Roman Law" in last edition of Encyclopædia Britannica.

3. A course of lectures is delivered on General and Historical Jurisprudence, in which the attention of the student is directed to the definition and analysis of *law* and of *rights*, to the sources of law, to the classification of rights, to the consideration of antecedent rights *in rem* and *in personam*, to remedial rights, to adjective private law, to the nature of public law and its various divisions, and to the application of law. Students are recommended to read the following books: T. E. Holland, Elements of Jurisprudence; Sir H. Maine, Ancient Law, and his Lectures XII., XIII., in The Early History of Institutions; Articles on the English Historical School of Jurisprudence, by Sir Frederic Harrison in Vols. 29-30, *Fortnightly Review*. They may also refer to Sir W. Markby, Elements of Law; O. W. Holmes, Common Law; Sir F. Pollock, First Book of Jurisprudence; Sir H. Maine's works so far as not above specified; Bryce, Lectures on History and Jurisprudence; Salmond's Jurisprudence.

## PHILOSOPHY.

### UNIVERSITY OF TORONTO:

- J. G. HUME, M.A., PH.D. . . . . *Professor of the History of Philosophy.*  
A. KIRSCHMANN, PH.D., *Professor of Philosophy and Director of the Psychological Laboratory.*  
F. TRACY, B.A., PH.D. . . . . *Associate Professor of Philosophy.*  
A. H. ABBOTT, B.A., PH.D. . . . . *Associate Professor of Philosophy.*  
W. G. SMITH, B.A. . . . . *Assistant Professor of Psychology.*  
T. R. ROBINSON, PH.D. . . . . *Assistant Professor of Philosophy.*  
G. S. BRETT, M.A. . . . . *Lecturer in Greek Philosophy.*  
R. B. LIDDY, M.A. . . . . *Demonstrator.*  
E. J. PRATT, M.A. . . . . *Demonstrator.*

### UNIVERSITY COLLEGE:

- J. G. HUME, M.A., PH.D. . . . . *Professor of Ethics.*



## VICTORIA COLLEGE:

W. B. LANE, M.A., PH.D.....*Professor of Ethics.*W. T. BROWN, M.A., PH.D.....*Lecturer in Ethics.*

## TRINITY COLLEGE:

G. S. BRETT, M.A.....*Professor.*

## ST. MICHAEL'S COLLEGE:

REV. H. CARR, B.A....*Professor of the History of Greek Philosophy.*REV. D. CUSHING.....*Professor of Psychology.*REV. J. J. PURCELL, *Professor of Metaphysics, Logic and History of  
Philosophy.*REV. F. D. MEADER, B.A.....*Professor of Cosmology.*REV. N. ROCHE.....*Professor of Ethics.***Second Year.**

1. A course of lectures on General Psychology. Fifty hours. Professor Smith.

2. Seminary and laboratory work to supplement Course 1. Seminary work for 1914-15, Titchener's Text-book of Psychology, Parts 1 and 2. Professor Smith.

3. A course of lectures and seminary on Locke's Essay on the Human Understanding. Fifty hours. Professor Abbott.

4. Ethics. Outline study of the systems of Plato and Aristotle. Fifty hours. Professor Brett and Professor Lane.

**St. Michael's College.**

5. Elementary Psychology. Fifty hours.

6. An introductory course in the nature and scope of Logic; the nature of deductive and inductive reasoning; the syllogism and its rules. Fifty hours.

7. An introduction to Ontology. Fifty hours.

8. A course of lectures in Greek Philosophy. Twenty-five hours.

**Third Year.**

9. History of the Problems of Ancient and Mediæval Philosophy. Seventy-five hours. Mr Brett.

10. Mediæval and early Modern Philosophy. Seventy-five hours. Professor Abbott. Texts: De Wulf, History of Mediæval Philosophy, Selections from Anselm, Hobbes, Des Cartes, Berkeley.

11. A course of lectures on Psychological Optics, Acoustics and Psychophysics, time and space relations. Seventy-five hours. Professor Smith.

12. Laboratory practice on the work covered in 11. Professor Smith.

13. Logic. Fifty hours. Professor Tracy. The scope and method of Logic; the nature of inductive and deductive reasoning; the canons and methods of scientific investigation; introductory studies in the philosophy of knowledge.

14. Social Ethics. Seventy-five hours. Professor Hume, Professor Brett and Professor Lane. The course will include the following subjects: (a) Study of primitive morality, character of early societies, and lines of progress; (b) Greek morality as represented in Plato and Aristotle, with special reference to (1) the intellectual ideals of Greece, (2) development of democracy, (3) social conditions; the expansion of Greek thought (Stoic and Epicurean Systems), and the comparative study of Greek and Christian ideals; (d) modern thought from Hobbes to Mill with special reference to (1) the transition from mediæval to modern thought, (2) the progress of individualism, (3) economic aspects of social life in their ethical significance, (4) comparison of ancient and modern views of the state with especial reference to democracy. The following authors will be subjects of special study: Plato, Aristotle, Hobbes, Adam Smith, J. S. Mill. A general knowledge of the life and work of each will be required, together with a special knowledge of the following texts: Plato, Republic, Books I.-IV.; Aristotle, Politics, Books I., VII., VIII. (Jowett's Translation); Hobbes, Leviathan, Book I.; J. S. Mill, Utilitarianism; selected passages from Aristotle's Ethics. The following books should be consulted in addition to those already named: Dewey and Tufts, Ethics; G. S. Brett, The Government of Man; J. G. Hume, Political Economy and Ethics; James Seth, A Study of Ethical Principles; Sidgwick, History of Ethics; Maine, Ancient Law (Chap. V.); Darwin, Descent of Man (Chaps. IV. and V.).

The examination will comprise two papers (a) on the above texts, (b) on theory and topics discussed in the lectures.

15. History of Modern Ethics. Seventy-five hours. Professor Robinson and Dr. Brown. The lectures will deal chiefly with English Ethics, considered under the following types: (a) Hedonistic, Utilitarian, and Evolutional theories; (b) Intellectualist theories; (c) Intuitionist and Moral Sense theories; (d) "Sympathy" theories; (e) Idealistic theories.

References: Selby-Bigge, British Moralists; Rand, Classical Moralists; Sidgwick, Methods of Ethics; Martineau, Types of Ethical Theory; Rashdall, Theory of Good and Evil. A seminary in which the following texts will be read and discussed: selections from Hobbes, Leviathan; Mill, Utilitarianism; Spencer, Data of Ethics.

### St. Michael's College.

16. A course of lectures on General Philosophy. Seventy-five hours.

17. Patristic Philosophy and Mediæval Philosophy. Stöckl, De Wulf, Turner, Selections from St. Augustine. Fifty hours.

18. A course of lectures in Psychology. Course 5 continued. Fifty hours.

19. A course of lectures on Psycho-physiology. Fifty hours.

20. A course in the categories of Aristotle. Hickey, Hugon, Balmes. Fifty hours.

21. A course of lectures on the theories of matter and the origin of the world. Fifty hours.

22. Induction, its nature and principles; inductive methods; observation, hypothesis, experimentation; classification; various kinds of demonstration and methods. Fifty hours.

23. Ethics. Fifty hours.

24. Social Ethics. Twenty-five hours.

25. Seminary on Social Ethics. Twenty-five hours.

#### Fourth Year.

26. History of the problems of Modern Philosophy with special reference to British Philosophy. Seventy-five hours. Professor Abbott. References: Seth, English Philosophers and Philosophical Schools; Cushman, History of Philosophy, Vol. II.

27. Modern Philosophy. Seventy-five hours. Professor Hume. Texts: Berkeley, Principles of Human Knowledge; Hume, Treatise on Human Nature; Kant, Critique of Pure Reason.

Seminary on Kant.

28. Exposition and Criticism of the systems of Spinoza and Leibnitz. Fifty hours. Professor Abbott.

29. A course of the History of Psychology, and modern Psychological problems. Fifty hours. Professor Smith.

30. Seminary for the study of Psychological problems. Professor Smith.

31. Logic. History and criticism of logical and epistemological theories. Fifty hours. Professor Tracy. Texts: Plato, Theatetus; Aristotle, Organon; Bacon, Novum Organum; Mill, System of Logic; Green, Lectures on Logic.

32. Modern Ethics. Seventy-five hours. Professor Tracy. The lectures will deal with the following types of ethical theory; Hedonism, Utilitarianism, Intellectualistic systems, Intuitionism, Evolutionary Ethics, with special reference to Herbert Spencer, Idealistic systems, with special reference to Kant and T. H. Green. Texts: Hume, Enquiry concerning the Principles of Morals, with Appendices; Spencer, Data of Ethics; Green, Prolegomena to Ethics. Two papers will be set at the final examination, one on the topics treated in the lectures, the other on the prescribed texts.

33. Exposition and criticism of the Ethics of Kant and T. H. Green. Fifty hours. Professor Hume and Professor Lane.

34. Social Ethics. Lectures and seminary. Fifty hours. Professor Robinson, Professor Lane. (1) Study of social origins, early history of the family and of social organization; development of law and justice; history of moral ideas and customs in their relation to economic and political con-

ditions. (2) Theories of the mutual relations of the state and the individual; grounds of political obligation. (3) Modern social conditions and problems. References: Hobhouse, *Morals in Evolution*; Brett, *Government of Man*; Green, *Theory of Political Obligation*; Ellwood, *Sociology and Modern Social Problems*.

NOTE.—Essays and term examinations will be required and students are recommended to acquire some practical experience, by undertaking a limited amount of Social Service under the direction of the staff.

35. A graduation thesis is required from every student in special Philosophy. Topics for the theses must be selected on or before October 15th from the following subjects: History of Philosophy, Psychology, Logic, Ethics, Social Philosophy.

### **St. Michael's College.**

36. A course of lectures in General Philosophy. Seventy-five hours.

37. History of Modern Philosophy. Fifty hours.

38. A course of lectures on the philosophy of the mind. Fifty hours.

39. A course of lectures on Psycho-physiology. Fifty hours.

40. Natural Theology. Hickey, Sanseverino, Selections from St. Thomas. Fifty hours.

41. History and criticism of logical and epistemological problems. Plato, *Theætetus*; Bacon, *Novum Organum*; Aristotle, *Organon*; Coffey.

42. Lectures and seminary on the laws of nature, evolution, properties and constituent principles of bodies. Fifty hours.

43. Ethics. Fifty hours.

44. Social Ethics. Twenty-five hours.

45. Seminary on Social Ethics. Twenty-five hours.

46. A graduation thesis is required from every student in Special philosophy. Topics for theses must be selected on or before October 15th, from the following subjects: History of Philosophy, Psychology, Logic, Ethics, Social Philosophy.

### **Graduate Courses.**

1. A candidate for the degree of M.A. or of Ph.D. must select for a thesis a topic in his major subject.

2. Each candidate for the degree of M.A. or of Ph.D. must undertake an investigation upon the subject of his thesis under the direction of the Head of the Department and another member of the staff in Philosophy to each of whom he must report regularly.

3. Candidates for the M.A. degree who are graduates in Special Philosophy, must take, besides the work for the thesis, two additional courses approved by the staff in Philosophy.



4. Special provision will be made for graduates from other departments who wish to pursue graduate studies in Philosophy. It is expected that students other than graduates in Special Philosophy will require two years to obtain the M.A. degree in Philosophy.

5. The following are offered for the session of 1914-15 provided a sufficient number of graduate students enrol in any of these courses:

- (1) A course of lectures and seminary on Hegel and present-day controversies between Hegelians and Pragmatists... Professor Hume.
- (2) Types of Logical Theory..... Professor Tracy.
- (3) The Scottish School of Philosophy—a critical consideration of its problems and their history..... Professor Abbott.
- (4) Social philosophy and sociology..... Professor Robinson.
- (5) Historical development of western philosophy, *or*, Ancient philosophy and religious beliefs, Comparative study of ancient and modern Ethics..... Mr. Brett.
- (6) Psychology of Religion..... Professor Smith.
- (7) The problem of Freedom in recent philosophical writings (Bergson and others) *or* ethical Ideals..... Professor Lane.
- (8) Philosophy of Religion..... Dr. Brown.

### MATHEMATICS AND MECHANICS.

ALFRED BAKER, M.A.....	<i>Professor.</i>
A. T. DELURY, M.A.....	<i>Professor.</i>
M. A. MACKENZIE, M.A., F.I.A.....	<i>Associate Professor.</i>
J. C. FIELDS, B.A., PH.D., F.R.S.....	<i>Associate Professor.</i>
S. BEATTY, M.A.....	<i>Lecturer.</i>
I. R. POUNDER, B.A.....	<i>Lecturer.</i>
J. MCQUEEN, B.A.....	<i>Fellow.</i>
J. H. BIRKENSHAW, B.A.....	<i>Fellow.</i>

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W. J. LOUDON, B.A..... *Professor of Mechanics.*

### Mathematics.

1. Algebra: Simple equations of one, two and three unknown quantities; quadratic equations of one and two unknown quantities; elementary treatment of variation, proportion and progressions; interest forms and annuities. Text-book: DeLury, Intermediate Algebra. Twenty-five hours.

2. Algebra: A course, supplementary to 1, permutations, combinations and binomial theorem. Fifteen hours.

3. Algebra: A course as outlined in 1 and 2, and in addition limits, infinite series, and the exponential and logarithmic series, for students in the Faculty of Applied Science. Fifty hours.

4. Analytical Geometry: A course in elementary analytical geometry of two dimensions, establishing the more important properties of the conic sections. Text-book: Baker, Analytical Geometry for Beginners. Twenty-five hours.

5. Analytical Geometry: A course similar to 4, for students in the Faculty of Applied Science. Twenty-five hours.

6. Plane Trigonometry: Trigonometrical ratios with their relations to one another: sines, etc., of the sum and difference of angles, with deduced formulas; solution of triangles, expressions for the area of triangles; radii of circumscribed, inscribed and escribed circles. Hall and Knight, Elementary Trigonometry. Twenty-five hours.

7. Plane Trigonometry: A course similar to 6 for students in the Faculty of Applied Science. Twenty-five hours.

8. Analytical Geometry: The more advanced course. Text-books: C. Smith, Conic Sections; Salmon, Conic Sections. Fifty hours.

9. Algebra: The more advanced course. Text-books: Hall and Knight, Higher Algebra; C. Smith, Treatise on Algebra; Chrystal, Algebra. Fifty hours.

10. Plane Trigonometry: The more advanced course. Text-books: Todhunter and Hogg, Plane Trigonometry; Hobson, Trigonometry. Fifteen hours.

11. Spherical Trigonometry. Text-books: Todhunter and Leatham, Spherical Trigonometry. Ten hours.

12. Differential and Integral Calculus: In the Second Year the elementary course in differential and integral calculus is designed to afford such knowledge of the character, methods and place in science of this important subject as educated men should possess, and also to enable students in chemistry, engineering, etc., to understand those text-books in which the calculus is introduced. Fifty hours.

13. Differential Calculus: The more advanced course. Text-books: Williamson, Differential Calculus; Kiepert, Differential-Rechnung; Gibson, Calculus. Fifty hours.

14. Integral Calculus: The more advanced course. Text-books: Williamson, Integral Calculus; Kiepert, Integral-Rechnung. Fifty hours.

15. Solid Geometry. Text-books: C. Smith, Solid Geometry; Frost, Solid Geometry. The department is furnished with the admirable thread and plaster models of Brill for illustrating the teaching of geometry of three dimensions. Fifty hours.

16. Newton's Principia. Section I. Text-books: Evans' Main's Principia; Frost's Principia. Fifteen hours.

17. Theory of Equations, including Determinants. Text-book: Burnside and Phanton, Theory of Equations. Fifteen hours.

18. Elementary Astronomy: A course of fifty lectures, chiefly descriptive, twice a week throughout the year. Text-book: Todd, New Astronomy. Reference: Young, Manual of Astronomy.

18a. Elementary Practical Astronomy: Intended to accompany 18. Consisting of Observations (including photography) of the heavenly bodies; together with exercises in simple astronomical measurements, and in the use of almanacs, globes, star-maps, photographs, etc. Two hours a week (in afternoon or evening as arranged). Text-book: Whiting, Exercises in Astronomy.

19. Astronomy: The more advanced course. Text-books: Barlow and Bryan, Elementary Mathematical Astronomy; Godfray, Astronomy; Chauvenet, Astronomy; Godfray, Lunar Theory; Cheyne, Planetary Theory. Fifteen hours.

20. Practical Astronomy: Observations with the equatorial telescope, the transit instrument and the sextant. Two evenings a week throughout the year. By courtesy of the director of the Meteorological Observatory the astronomical instruments there are used by the students of the University. Text-book: Campbell, Practical Astronomy.

21. Differential Equations: The elementary course. Fifteen hours.

22. Differential Equations: The advanced course. Text-book: Johnson, Differential Equations; Forsyth, Differential Equations. Fifty hours.

23. Higher Plane Curves: With Introductory course in Modern Geometry. Text-books: Salmon, Higher Plane Curves; Clebsch, Vorlesungen über Geometrie. Twenty-five hours.

24. Quaternions with outlines of other Space Analyses. Text-books: Kelland and Tait, Quaternions; Joly, Manual of Quaternions; Tait, Quaternions. Fifty hours.

25. Invariant Theory. Text-books: Salmon, Higher Algebra; Elliott, Algebra of Quantics; Gordan, Invariantentheorie; Grace and Young, Algebra of Invariants. Fifty hours.

26. Theory of Numbers. Text-books: Mathews, Theory of Numbers; Dirichlet, Zahlentheorie (fourth edition). Fifty hours.

27. Theory of Substitutions. Text-books: Netto, Theory of Substitutions; Weber, Lehrbuch der Algebra. Fifty hours.

28. Elementary Theory of Functions. Text-books: Harkness and Morley, Introduction to Analytic Functions; Forsyth, Theory of Functions. Fifty hours.

29. Elliptic Functions. Text-books: Appell and Lacour, Fonctions Elliptiques. Fifty hours.

30. Tangential Co-ordinates or Trilinear Co-ordinates. Text-books: Papelier, Coordonnées Tangentielles; Ferrers, Trilinear Co-ordinates. Fifty hours.

31. Modern Synthetic Geometry. Text-books: Reye, Geometry of Position (translated by Holgate); Cremona, Projective Geometry; Lachlan, Modern Pure Geometry; Durell, Plane Geometry for Advanced Students; Veblen and Young, Projective Geometry. Fifty hours.

32. Theory of Probability. Text-book: Article on "Probability" in the eleventh edition of the *Encyclopædia Britannica*. Twenty-five hours.

Course 32 is an alternative course for Course 8, Actuarial Science, for those offered students of the Fourth Year who have not taken Actuarial Science in the earlier years.

### **Mechanics.**

1. Elementary Mechanics: A course of 15 lectures, twice a week during Michaelmas term.

2. Elementary Statics and Dynamics: A course of 40 lectures, three times a week during the Easter term.

3. Advanced Statics: A course of 35 lectures, three times a week during Easter term.

4. Particle Dynamics: A course of 25 lectures, twice a week during Michaelmas term.

5. Rigid Dynamics: A course of 50 lectures, twice a week.

6. Celestial Mechanics: A course of 50 lectures, twice a week.

7. Method of Least Squares: Once a week during the Easter term.

8. Dynamics of Rotation: A course of 50 lectures, twice a week.

9. Principles of Mechanics: For students taking the Second Year of the course in Commerce and Finance. Fifteen lectures.

### **Actuarial Science.**

1. Arithmetic: Decimals, elements of statistics, interest and discount, annuities certain, bond values, etc. Twenty-five hours.

2. Accounting: An introductory course in general principles. Twenty-five hours.

3. Accounting, advanced: A critical examination of the Theory and Practice of Accounting and the preparation of financial statements. Twenty-five hours.

4. The Elements of the Theory of Life Annuities and Life Assurances. Twenty-five hours.

5. Finite Differences: Elementary methods and formulæ. Twelve hours.

6. The Theory of Interest: An advanced course. Twelve hours.

7. The Theory of Life Contingencies: An advanced course, Part I. Twenty-five hours.

8. The Theory of Life Contingencies: An advanced course, Part II. Twenty-five hours.



**PHYSICS.**

J. C. McLENNAN, PH.D.,	<i>Professor and Director of the Physical Laboratory.</i>
E. F. BURTON, B.A., PH.D.....	<i>Associate Professor.</i>
LACHLAN GILCHRIST, M.A., PH.D.....	<i>Demonstrator.</i>
JOHN SATTERLY, D.Sc., M.A., A.R.C.S.....	<i>Lecturer.</i>
WILLIAM WILSON, D.Sc., B.A.....	<i>Demonstrator.</i>
E. C. S. DICKSON, B.A., PH.D.....	<i>Assistant Demonstrator.</i>
G. E. M. JAUNCEY, B.Sc.....	<i>Assistant Demonstrator.</i>
R. H. WILSON, B.Sc.....	<i>Assistant Demonstrator.</i>
MISS A. T. REED, B.A.....	<i>Class Assistant.</i>
MISS C. E. CLINKSCALE, B.A.....	<i>Class Assistant.</i>
MISS R. M. EVANS, B.A.....	<i>Class Assistant.</i>
MISS R. M. FLEMING, B.A.....	<i>Class Assistant.</i>
MISS GRACE MARTIN, B.A.....	<i>Class Assistant.</i>
A. R. McLEOD, B.A.....	<i>Class Assistant.</i>
R. C. DEARLE.....	<i>Class Assistant.</i>
C. G. FOUND.....	<i>Class Assistant.</i>
W. S. McCLENAHAN.....	<i>Class Assistant.</i>
C. L. TRELEAVEN.....	<i>Class Assistant.</i>

**Astro-Physics.**

C. A. CHANT, M.A., PH D.....	<i>Associate Professor.</i>
E. A. HODGSON, M.A.....	<i>Assistant.</i>
F. L. BIAKE.....	<i>Class Assistant.</i>
G. S. EASTON, B.A.....	<i>Assistant.</i>
G. S. CAMPBELL.....	<i>Assistant.</i>
A. E. ROSBOROUGH.....	<i>Assistant.</i>

The work of instruction in Physics consists of a series of courses of lectures and of practical work in the laboratories, which are embodied in the following schedule:

1. A course of fifty lectures on the Properties of Matter, Hydrostatics and Heat. These lectures are illustrated by experiments. Text-books: Wagstaff, Properties of Matter; Stewart and Satterly, Text-book of Heat.

2. Properties of Matter, Mechanics, Hydrostatics and Heat: A laboratory course of seventy-five hours, one afternoon a week, throughout the year, designed to illustrate the lectures in Course 1 in Physics, and Course 1 in Mechanics. Text-books: Loudon and McLennan, A Laboratory Course in Experimental Physics; Stewart and Satterly, Text-book of Heat; Eggar, Mechanics; Edser, General Physics; Thomson and Poynting, Properties of Matter; Wagstaff, Properties of Matter.

3 Elementary Magnetism and Electricity: A course of thirty-five lectures, commencing in the Michaelmas term. (In the Easter term this course may be given in two divisions, 3a and 3b.) Text-books: Hadley,

Magnetism and Electricity, for Students; Sylvanus Thompson, Electricity and Magnetism; Glazebrook, Electricity and Magnetism; Watson, A Text-book of Physics; Stewart, Electricity and Magnetism.

4. Elementary Light: A course of twenty-five lectures, commencing in the Michaelmas term. Text-books: Edser, Light, for Students; Watson, A Text-book of Physics.

5. Elementary Acoustics: A course of fifteen lectures, one a week. Text-books: Catchpool, Text-book of Sound; Thomson and Poynting, Sound; Zahm, Sound and Music; Watson, A Text-book of Physics; Barton, Text-book of Sound.

The lectures in Courses 3, 4 and 5 are illustrated by experiments.

6. Magnetism, Electricity, Light and Acoustics: A laboratory course of one hundred and fifty hours two afternoons a week throughout the year, designed to illustrate the lectures in Courses 3, 4 and 5. Text-books: Loudon and McLennan, A Laboratory Course in Experimental Physics; Carhart and Patterson, Electrical Measurements; Edser, Light, for Students.

7. A course of lectures once a week in the Easter term on electrical units and on the elements of the mathematical theory of electricity and magnetism.

8. A course of lectures twice a week throughout the year on the properties of matter, including acoustics, and a laboratory course of two hours a week throughout the year, designed to illustrate the lectures.

9. Elementary Physics: An introductory course of fifty hours in general physics twice a week during the year. Text-books: Satterly, Measurement and Mechanics; Stewart, Senior Heat; Stewart, New Matriculation Light; Millikan and Gale, Physics.

10. A laboratory course of fifty hours two hours a week throughout the year, designed to illustrate lecture Course 9.

11. A laboratory course of twenty-five hours, designed to be an extension of the general course of experimental physics embraced in Course 10.

12. Applications of the theory of the Potential to Physics.

13. Properties of Matter: A course of lectures twice a week, commencing in the Michaelmas term. Text-books: Poynting and Thomson, Properties of Matter; P. G. Tait, Properties of Matter; Boynton, Kinetic Theory; Jäger, Die Fortschritte der Kinetischen Gastheorie.

14. Geometrical Optics: A course of lectures three times a week in the Michaelmas term. Text-books: Herman, Geometrical Optics; Searle, Geometrical Optics.

15. Advanced Heat and Elementary Thermodynamics: A course of lectures twice a week, for fifteen weeks. Text-book: Poynting and Thomson, Heat; Preston, Heat; Griffiths, Thermal Measurement of Energy.

16. Thermodynamics: A course of lectures during the Michaelmas term, on the fundamental principles of Thermodynamics.

17. A laboratory course on the accurate determination of physical constants, together with practice in laboratory arts. This course involves about one hundred and fifty hours' laboratory work. Text-book: Watson, *A Text-book of Practical Physics*.

18. Mathematical Theory of Electricity and Magnetism: A course of lectures twice a week throughout the year. Text-books: J. J. Thomson, *Elements of Electricity and Magnetism*; Joubert, Foster and Atkinson, *Electricity and Magnetism*; Gerrard, *Lecons sur l'Electricité*, Tomes I. and II.

19. Theory of Optics: A course of lectures twice a week throughout the year. Text-books: Drude, *Theory of Optics*; Mann, *Manual of Advanced Optics*; Baly, *Spectroscopy*; Wood, *Physical Optics*; Schuster, *Theory of Optics*.

20. Introduction to Astrophysics: A course of fifty lectures twice a week throughout the year. Text-books: Scheiner, *Astronomical Spectroscopy*; Salet, *Astronomie Spectroscopique*; Baly, *Spectroscopy*.

21. Elasticity: A course of lectures twice a week throughout the year, dealing with the mathematical theory of elasticity, and leading up to the elastic solid theory of light. Text-books: Poynting and Thomson, *Properties of Matter*; Christiansen, *Elements of Theoretical Physics*; Pellat, *Polarisation et Optique Crystalline*.

22. Acoustics: A course of lectures during the Michaelmas term on Fourier's Series and its applications to Physics. Text-books: Donkin, *Acoustics*; Schaik, *Wellenlehre und Schall*; Byerly, *Fourier's Series and Spherical Harmonics*; Barton, *A Text-book on Sound*.

23. Thermodynamics: A course of lectures during the Michaelmas or Easter term. Text-books: Poynting and Thomson, *Heat*; Clausius, *Mechanical Theory of Heat*; Meyer, *Kinetic Theory of Gases*.

24. Hydro-mechanics: A course of lectures during the Easter term. Text-books: Minchin, *Hydrostatics*; Besant, *Hydro-mechanics*; Lamb, *Hydrodynamics*.

25. Colloidal Solutions: A course of lectures on the physical properties of colloidal solutions. Text-books: Cotton and Mouton, *Les Ultra-microscopes et les objets ultramicroscopiques*; R. Zsigmondy, *Zur Erkenntnis der Kolloide*.

26. Discharge of Electricity through Gases: A course of lectures on the electromagnetic theory of light and the electronic theory of matter, together with a discussion of the phenomena associated with the conduction of electricity through gases, and with the radioactivity of matter. Text-books: J. J. Thomson, *Recent Researches in Electricity and Magnetism*; Conduction of Electricity through Gases; E. Rutherford, *Radioactivity*.

27. The Electromagnetic Theory of Light and the Electron Theory of Matter: An advanced course of lectures in which the general equations of the electromagnetic field are established and their applications to the problems of reflection and refraction discussed. The course also includes a development of the electron theory of matter and of the conception of

electromagnetic mass together with the application of the theory of the problems of dispersion, absorption, thermal and electrical conduction in metals, rotary polarisation and magnetic optics. Text-books: J. J. Thomson, Corpuscular Theory of Matter; Abraham and Langevin, Ions, Electrons, Corpuscles; Drude, Theory of Optics; Voigt, Magneto und Elektro-optik; Lorentz, The Theory of Electrons.

28. A laboratory course designed as an extension of Course 17, and as an introduction to research work. Students taking up this course are encouraged to spend as much time as possible at laboratory work. A seminar is held in connection with this course *bi-weekly*, under the supervision of the Director of the Laboratory, at which reports on papers in the current physical journals are presented and discussed.

29. A laboratory course in Astrophysics, to accompany Course 20. One afternoon a week in Michaelmas term and two in Easter term.

30. A course for the discussion of astronomical observations and for computation, associated with Course 20 of the Department of Mathematics. Two hours a week throughout the year.

Post-Graduate Work: Special facilities are offered in the laboratories and workshops to graduate students who desire to engage in research work.

Regulations.—*Deposit Fee*: Each student taking the laboratory Course 2, 6, 10, 11, 17, and 28 is required to make a deposit of two dollars (\$2.00) before commencing work. All supplies, apparatus broken or destroyed and all fines will be charged against this deposit, which must be renewed when exhausted. At the close of the session cash balances will be returned on a day appointed for the purpose.

Additional Text-books.—General Physics: Watson, Winkelmann, Wüllner, Lehrbuch der Experimental Physik; Ganot, Hastings and Beach, Deschanel (ed. Everett), Jamin, Violle, Nicholas and Franklin, Barlow, Thomson and Tait, Macfarlane's Tables, Chambers' Tables, Kaye and Laby's Tables, Leffeldt, Millikan, Mann and Twiss, Daniell.

Elementary Mechanics: Eggar, Ashford, Lock, Glazebrook, Briggs and Bryan, Magnus, Loney, Garnet.

Elementary Hydrostatics: Glazebrook, Briggs and Bryan, Loney.

Elementary Heat: Glazebrook, Stewart, Jones, Tyndall, Balfour Stewart, Tait, Thomson and Poynting, Edser.

Elementary Light: Stewart and Satterly, Edser, Deschanel, Jones, R. W. Stewart, Tyndall, Tait, Wright, Glazebrook.

Elementary Electricity and Magnetism: Poyser, Silvanus Thompson, Glazebrook, Leffeldt, Cumming, Larden, R. W. Stewart, Day.

Elementary Sound: Catchpool, Tyndall, Zahm, Taylor, Stone, Mayer, Capstick, Thomson and Poynting.

Geometrical Optics: Herman, Aldis, Heath, Parkinson.

Hydromechanics: Besant, Minchin, Greenhil, Lamb.

Acoustics: Donkin, Rayleigh, Helmholtz, Airy, Koenig.

Elasticity: Williamson, Lambe, Ibbetson, Love, Todhunter.



Physical Optics: Drude, Jamin, Verdet, Basset, Glazebrook, Lommel, Mascart, Schuster, Wood, Preston.

Thermodynamics: Clausius, Buckingham, Parker, Whetham, Planck, Preston, Maxwell, Tait.

Properties of Matter: Meyer, Kinetic Theory; Jeans, Dynamical Theory of Gases.

Electricity and Magnetism: Jude and Satterly, Ashford, Brooks and Poyser, J. J. Thomson, Poynting and Thomson, Emtage, Maxwell, Mascart and Joubert, Gerrard, Gray, Heaviside, Ebert, DuBois, Foster and Porter, Webster, Strutt, Rutherford (Radiation and Radioactive Substances), Thomson, Soddy, Fournier d'Albé, Stewart.

Practical Physics: Loudon and McLennan, Bower and Satterly, Carhart and Patterson, Stewart and Gee, Glazebrook and Shaw, Kohlrausch, Witz, Ayrton, Nichols, Findlay, Watson, Schuster and Lees.

### BIOLOGY.

B. A. BENSLEY, B.A., PH.D., *Associate Professor of Zoology and Acting Head of Department of Biology.*

J. H. FAULL, B.A., PH.D. .... *Associate Professor of Botany*

W. H. PIERSOL, B.A., M.B., *Associate Professor of Embryology and Histology.*

R. B. THOMSON, B.A. .... *Associate Professor of Botany.*

E. M. WALKER, B.A., M.B. .... *Assistant Professor of Zoology.*

C. D. HOWE, PH.D. .... *Assistant Professor of Botany.*

A. G. HUNTSMAN, B.A., M.B. .... *Lecturer in Biology.*

A. F. COVENTRY, B.A. .... *Lecturer in Vertebrate Embryology.*

J. H. WHITE, M.A. .... *Lecturer in Botany.*

A. D. ROBERTSON, B.A. .... *Demonstrator in Biology.*

A. R. COOPER, M.A. .... *Demonstrator in Biology*

MISS J. MCFARLANE, M.A. .... *Fellow in Botany*

G. H. GRAHAM, M.A. .... *Assistant in Botany.*

O. C. J. WITHROW, M.B. .... *Class Assistant in Biology.*

W. H. T. BAILLIE, B.A. .... *Class Assistant in Biology.*

W. HAMILTON. .... *Class Assistant in Biology.*

H. DEW. BALL, M.B. .... *Class Assistant in Biology.*

N. A. WALLACE, B.A. .... *Class Assistant in Biology.*

H. C. PUGH, B.A. .... *Class Assistant in Biology and Botany.*

R. P. WODEHOUSE, B.A. .... *Class Assistant in Biology and Botany.*

H. R. RUTHERFORD. .... *Class Assistant in Botany.*

H. B. SIFTON. .... *Class Assistant in Botany.*

MISS S. L. SMITH. .... *Class Assistant in Botany.*

MISS M. C. TUCKER. .... *Class Assistant in Biology and Botany.*

L. O. C. SKEELES, B.A., M.B. .... *Class Assistant in Biology.*

G. A. DAVIS, B.A. .... *Class Assistant in Biology.*

J. A. DICKSON, B.A. .... *Class Assistant in Biology.*

L. P. MENZIE, B.A. .... *Class Assistant in Biology*

C. H. MORSE. .... *Class Assistant in Botany.*

*Courses extending over only the Michaelmas or the Easter term are indicated as (m) and (e) respectively.*

The lectures and practical instruction in this subject are given in the University Biological and the Botany and Forestry Buildings.

The following courses are provided:

A.—IN THE FACULTY OF ARTS.

1. Elementary Biology: A course of two lectures a week throughout the session is designed as an introduction to the whole range of biological studies. After a sketch of the scope and objects of these, the lectures will treat of the typical forms and life phenomena of plants and animals. Part I. Zoology; Part II. Botany. Students are recommended to make use of the Biological and Botanical Museums in connection with this course of lectures.

This course is repeated at Trinity College.

1a. Elementary Biology: A course of two lectures a week throughout the session on the structure and classification of plants and animals. Part I., Botany; Part II., Zoology. For Honour Science students.

2. A practical course of fifty hours in Zoology and Botany for General Course students.

3. Elementary Zoology: A laboratory course of fifty hours on the general structure of the animal body, its organs and tissues and their functions; principles of adaptation, specialisation, and homology, based on selected types. Text-book: Parker & Parker, *Elementary Practical Zoology*. For reference: Parker & Haswell, *Text-book of Zoology* (e).

4. Elementary Botany: A laboratory course of fifty hours on the general structure of plants, by reference to selected types. Text-book: Coulter, Barnes and Cowles, *Text-book of Botany*. For reference: Kerner and Oliver, *Natural History of Plants*; Bergen and Davis, *Principles of Botany* (m).

5. Comparative Anatomy: A laboratory course of one hundred and fifty hours, comprising dissection and comparative study of selected vertebrate types: Part 1, Mammalian Anatomy (m); Text-book: Bensley, *Anatomy of the Rabbit*; Part 2, Anatomy of Lower Chordates (e). For reference: Parker, *Zootomy*; Kingsley, *Vertebrate Zoology*; Parker & Haswell, *Text-book*, Vol. 2; Wiedersheim, *Comparative Anatomy*; Reynolds, *Vertebrate Skeleton*; Kingsley, *Comparative Anatomy*.

6. Vertebrate Zoology: A course of fifty lectures on the system, structure and history of the vertebrates. For reference, as above (5); Gadow, *Classification of Vertebrata*; Smith Woodward, *Vertebrate Palæontology*.

7. Invertebrate Zoology: A course of twenty-five lectures and fifty hours laboratory work on the principal invertebrate phyla. Text-book: Parker & Haswell, Vol. I. (m).

8. Phanerogamic Botany: A course of twenty-five lectures and fifty hours laboratory work on the anatomy and morphology of the flowering

plants. Text-book: Strasburger, Jost, Schenck, and Karsten,—Text-book of Botany, or in German, Lehrbuch der Botanik für Hochschulen. For reference: Coulter, Seed-Plants; Gray's New Manual, 7th ed.; Britton and Brown, An Illustrated Flora; Scott, Fossil Botany; Penhallow, North American Gymnosperms (e).

9. A course on the anatomy and histology of selected vertebrate types and on the natural history of animal foods. For Household Science students.

10. Classification of Flowering Plants: A lecture and laboratory course of fifty hours in which representatives of the main divisions of the flowering plants are studied in illustration of the fundamental principles of classification. Reference is also made to distribution, especially of the local flora, and to the food plants and other economic plants of the group (m).

11. A special course in Invertebrate Zoology, dealing chiefly with those groups which include parasitic forms. For reference: Parker & Haswell, Text-book of Zoology, Vol. I. Braun: Thierische Parasiten des Menschen; Bronn, Das Thierreich; Doane, Insects and Disease. Sixty hours (m).

12. Zoological Collection: Students entering the Third Year in the special course of Biology are required to submit, as evidence of field proficiency, a collection of invertebrate animals from a prescribed group, together with an essay on the characters and habits of the forms collected. Special directions may be had on application to the Biological Department.

13. Vertebrate Embryology: A course of twenty-five lectures on the general embryology of the vertebrates.

14. A lecture and laboratory course of one hundred hours on vertebrate histology and cytology, including histological technique.

Text-books: Piersol, Normal Histology, 8th edition; Böhm, v. Davidoff and Huber, Text-book of Histology, 2nd edition. For reference: Prenant, Bouin, Maillard, Traité d'Histologie; Schäfer, Text-book of Microscopic Anatomy.

15. A laboratory course of one hundred hours on general animal histology and the principles of microscopical technique. Text-book: Dahlgren and Kepner, Principles of Animal Histology. For reference: Lee, Vade Mecum, 7th ed.

16. Cryptogamic Botany: A lecture and laboratory course of one hundred and twenty-five hours on the system and morphology of the cryptogams. Special attention will be paid to the algae, fungi and slime moulds. Text-book: Strasburger, Jost, Schenck and Karsten, Lehrbuch der Botanik. For reference: Jordan, General Bacteriology; Lafar, Technical Mycology; Conn, Bacteria, Yeasts and Moulds in the Home; Whipple, The Microscopy of Drinking Water; Oltmanns, Morphologie und Biologie der Algen (m).

16a. A short course of instruction on the Morphology and Physiology of Bacteria, Moulds, and Yeast Fungi.

17. Plant Physiology: A course of twenty-five lectures and seventy-five hours laboratory work on the physiology of plants. For reference: Green,

Vegetable Physiology; Macdougall, Text-book of Plant Physiology; Jost, Plant Physiology; Ganong, Plant Physiology; Pfeffer, Physiology of Plants (e).

18. Botanical Collection: Students entering the Third Year in Biology are required to submit a collection of at least 100 species of flowering plants, properly pressed, classified, mounted and labelled. For reference: Gray's Manual (7th ed.). Special directions may be had on application to the Department.

19. History and Theory of Biology: An opportunity is afforded to advanced students to become acquainted with the main problems of biology and with the history of the subject. The library is provided with the various works for consultation, and a course of vacation reading is prescribed, including Darwin, Origin of Species; Weissman, Lectures on the Theory of Descent; Jordan & Kellogg, Evolution and Animal Life; Kellogg, Darwinism of To-day; Osborn, From the Greeks to Darwin; Locy Biology and its Makers; Morgan, Experimental Zoology; De Vries, Species and Varieties, their Origin by Mutation; Thompson, Heredity; Locke, Variation, Heredity and Evolution; Bateson, Mendelism; Bateson, Problems of Genetics; Jenkinson, Experimental Embryology.

20. Vertebrate Embryology: A laboratory course of one hundred hours on the general embryology of the vertebrates and on the special embryology of the mammalia. For reference: Jenkinson, Vertebrate Embryology; Hertwig, Lehrbuch der Entwicklungsgeschichte; Lillie, Development of the Chick; Bailey and Miller, Embryology; Kellicott, Embryology.

21. Special Embryology of the Mammalia: A laboratory course of fifty hours on human embryology. For reference: Minot, McMurrich, Kollmann, Keibel and Mall.

22. Structural Neurology: A short course of lectures and laboratory work on the structure and development of the nervous system. For reference: Edinger, Anatomy of the Nervous System; Johnston, Nervous System of Vertebrates.

23. Zoological Collection: Students entering the Fourth Year in any one of the subdivisions of Biology are required to submit a collection of vertebrate animals from specified groups, together with an essay on the characters and habits of the forms collected. For reference: Jordan, Manual of Vertebrates.

24. Botanical Collection: Students entering the Fourth Year in any one of the subdivisions of Biology are required to submit a collection of cryptogamic plants from prescribed groups.

25. A lecture and laboratory course of one hundred hours on general invertebrate and vertebrate histology and cytology.

Text-book: Dahlgren and Kepner, Principles of Animal Histology. For reference: Wilson, The Cell in Development and Inheritance; Gurwitsch, Morphologie und Biologie der Zelle; Schneider, Histologie der Thiere; Prenant, Bouin, Maillard, Traité d'Histologie (Vol. I., Cytologie).



26. Vertebrate Zoology: A practical course of one hundred hours of laboratory and museum work on the morphology, classification and distribution of the vertebrates. For reference: Gadow, Classification of Vertebrates; Flower & Lydekker, Mammals Living and Extinct; Lydekker, Geographical History of Mammals; Cambridge Natural History. Vols. 7-10; Reynolds, The Vertebrate Skeleton; Flower, Osteology of the Mammalia; Smith Woodward, Outlines of Vertebrate Palæontology; Parker & Haswell Vol. 2; Willey, Amphioxus; Wiedersheim, Comparative Anatomy.

27. Advanced Invertebrate Zoology: A course of one hundred hours of lectures, laboratory and museum work on the morphology, embryology, classification and distribution of the invertebrates. This course is also designed to give training in laboratory methods and microscopic technique. For reference: Parker & Haswell, Vol. I.; Hertwig's Zoology, edited by Kingsley; Cambridge Natural History, Vols. I.-VI.; Korschelt & Heider, Embryology; Schneider, Histologie der Thiere; selected papers; Lee, Microtometist's Vade Mecum; Guyer, Animal Micrology.

28. A special course of one hundred hours on the system and natural history of animals, with special reference to those of Ontario or of Canada.

29. Students in the Third and Fourth Years of the Special Courses of Biology will be expected to show a reading knowledge of French and German.

30. Oecology and Plant Geography: A course on plant associations, the adaptations of plants to environmental factors, and the geographical distribution of plants. One hundred hours.

31. Phanerogamic Botany: A course dealing with living and fossil types. One hundred hours.

32. Cryptogamic Botany: A lecture and laboratory course of one hundred hours on the system and morphology of the liverworts, mosses, ferns, and fern allies. For reference: Campbell, Mosses and Ferns; Scott, Fossil Botany; Bower, Origin of a Land Flora.

33. Classification of cryptogams: A lecture and laboratory course of fifty hours in which representatives of selected groups of cryptogams are studied from the taxonomic standpoint.

34. Seminar in Botany, one hour bi-weekly, and the special study of a selected topic. One hundred and fifty hours.

Research: The members of the staff in this department are prepared to suggest problems for investigation in certain branches and provide materials and laboratory facilities for properly qualified students.

#### B.—COURSES IN THE FACULTY OF MEDICINE.

In addition to the course of lectures No. 14, which is common to students in Arts and Medicine, the following special courses are offered:

35. Elementary Biology, 50 lectures on the general principles of Biology and on special topics of interest to medical students.

36. A laboratory course of fifty hours in which types of special interest to Medical students are studied and which serves as an introduction to the use of the microscope.

37. A course of twenty-five explanatory lectures is given in connection with the foregoing laboratory course.

38. A course of seventy-five hours of laboratory work on Mammalian Anatomy is given as an introduction to Human Anatomy (m).

39. A course of twenty five lectures on Histology.

40. A laboratory course on General Histology. Fifty hours.

41. A short laboratory course on Embryology. Twenty-five hours (e).

42. A laboratory course on Human Microscopic Anatomy. Fifty hours (m).

#### C.—COURSES IN FACULTY OF APPLIED SCIENCE.

In addition to Course 1, which is taken by Applied Science Students, the following special courses are provided:

43. A Laboratory course of seventy-five hours serving as an introduction to the use of the microscope, especially in regard to the study of animal and vegetable tissues.

44. An elementary lecture and laboratory course of fifty hours on the economic Algae and Fungi.

45. A lecture and laboratory course of fifty hours on the morphology, oecology and classification of lower aquatic animals (e).

#### D.—COURSES IN FACULTY OF FORESTRY.

In addition to the courses, Nos. 1a, 2, 4, 11, 16. and part of 17, which are taken by the students in Forestry, the following special courses are provided:

46. Plant Pathology; thirty-five hours.

47. Economic Entomology; twenty-five lectures and twenty-five hours laboratory work (e).

#### E.—COURSE IN DEPARTMENT OF VETERINARY SCIENCE.

48. Elementary Botany; thirty-five hours.

#### ANATOMY.

J. PLAYFAIR McMURRICH, M.A., PH.D., LL.D.....	<i>Professor.</i>
J. C. WATT, B.A., M.B.....	<i>Lecturer.</i>
C. B. SHUTTLEWORTH, M.D., C.M., F.R.C.S.....	<i>Demonstrator.</i>
E. R. HOOPER, B.A., M.B.....	<i>Demonstrator.</i>
W. A. SCOTT, B.A., M.B., F.R.C.S.....	<i>Demonstrator.</i>
C. J. COPP, M.D., C.M.....	<i>Demonstrator.</i>
W. B. HENDRY, B.A., M.B.....	<i>Demonstrator.</i>
W. W. JONES, B.A., M.B., F.R.C.S.....	<i>Demonstrator.</i>

W. W. WRIGHT, M.B.....	<i>Demonstrator.</i>
G. E. WILSON, M.B., F.R.C.S.....	<i>Demonstrator.</i>
N. D'A. FRAWLEY, M.B.....	<i>Demonstrator.</i>
N. S. SHENSTONE, B.A., M.D.....	<i>Demonstrator.</i>
O. A. McNICHOL, M.D., C.M.....	<i>Demonstrator.</i>
G. R. PHILP, M.B.....	<i>Demonstrator.</i>

1. Osteology and Syndesmology: A course of two lectures a week, with demonstrations, throughout the year, together with recitations and practical work throughout the Michaelmas term.

2. Practical Anatomy.—First course: A laboratory course extending throughout the Easter term.

3. Practical Anatomy.—Second course: A laboratory course extending throughout the year.

4. Anatomy of the Nervous System.—A course of two lectures a week, with practical work, throughout the Michaelmas term.

5. Anatomical Research.—Opportunities will be afforded to properly qualified students for carrying on investigation in anatomical problems.

Text-books: Piersol, Human Anatomy; Morris, Human Anatomy; Cunningham, Text-book of Anatomy; Gray, Anatomy; Guide to the Dissection of the Human Body; Sobotta-McMurrich, Atlas and Text-book of Human Anatomy; Spalteholz, Hand Atlas of Human Anatomy; Toldt, Atlas of Human Anatomy; McMurrich, The Development of the Human Body; Villiger, Brain and Spinal Cord; Barker, The Nervous System; Edinger, Bau der nervösen Central-organe; Van Gehuchten, Le Système nerveux de l'Homme.

### BIOCHEMISTRY.

A. B. MACALLUM, M.A., M.B., Ph.D., Sc.D., LL.D., F.R.S....	<i>Professor.</i>
MISS C. C. BENSON, B.A., Ph.D., <i>Associate Professor of Physiological Chemistry in the Faculty of Household Science.</i>	
R. E. GABY, B.A., M.D.....	<i>Demonstrator.</i>
MISS A. HOMER, Sc.D.....	<i>Demonstrator.</i>
MISS O. G. PATTERSON, M.A., <i>Instructor in Biochemistry in the Faculty of Household Science.</i>	
MISS R. K. CHESNUT, B.A.....	<i>Junior Assistant.</i>
J. B. COLLIP, M.A.....	<i>Fellow.</i>
J. H. HOWELL, B.A.....	<i>Fellow.</i>

The following courses of instruction, each extending throughout the Session, are offered:

1. A course of elementary lectures on Biochemistry; two a week
2. A course of advanced lectures on Biochemistry; two a week.
3. A special course of advanced lectures on Biochemistry; two a week.
4. An elementary laboratory course in Biochemistry; four hours a week.

5. An elementary laboratory course in Biochemistry; six hours a week.
6. An advanced laboratory course in Biochemistry.
7. A laboratory course in the Chemistry of Food.
8. An advanced laboratory course in Biochemistry in which the Chemistry of Foods and problems in Nutrition are specially treated; ten hours a week.
9. Graduate courses of an advanced character and research in Biochemistry.
10. Course of elementary lectures with laboratory work on Biochemistry and Physiology; two hours a week.
11. A seminary course on recent advances in Physiology and Biochemistry; one hour a week.
12. An elementary course of instruction in Biochemistry, of fifty hours to be given in the Easter Term, for students of the General Course.
13. An elementary course on the composition of foods; four hours a week.

Text-books and works of reference: Halliburton's Essentials of Chemical Physiology; Allyn's Elementary Applied Chemistry; Hawk's Practical Physiological Chemistry (last edition); Salkowski's Prakticum der Physiologischen und Pathologischen Chemie (3rd edition); Hoppe-Seyler's Handbuch der Physiologisch-und Pathologisch-Chemischen Analyse, bearbeitet von Thierfelder (edition 1909); Text-book of Physiology, edited by Schäfer, two volumes; Lusk's Science of Nutrition; Chittenden's Physiological Economy in Nutrition; Chittenden's Nutrition of Man; Plimmer's Practical Physiological Chemistry; Recent Advances in Physiology and Biochemistry, edited by Leonard Hill; Cole's Practical Physiological Chemistry.

### PHYSIOLOGY.

T. G. BRODIE, M.D., F.R.S.....	<i>Professor.</i>
G. R. MINES, M.A.....	<i>Special Lecturer.</i>
MISS D. M. SAWYER.....	<i>Assistant.</i>
W. W. BARRACLOUGH, B.A.....	<i>Fellow.</i>
J. R. SMITH, B.A.....	<i>Fellow.</i>

The following courses of instruction, each extending throughout the Session are offered:

1. A course of lectures on Physiology; two a week.
2. A course of lecture-demonstrations on Neurology and the Special Senses; two a week.
3. A course of lectures on advanced Physiology; two a week.
4. A course of advanced lectures on Physiology; two a week.
5. An elementary laboratory course in Physiology; four hours a week.
6. An elementary laboratory course in Physiology; three hours a week.
7. Advanced laboratory courses in Physiology.
8. Graduate courses of an advanced character and research in Physiology.



9. A course of lectures on Elementary Physiology; two hours a week.
10. A course of 50 hours, including Elementary Physiology and Biochemistry.
11. A seminary course on recent advances in Physiology and Biochemistry; one hour a week.

Text-books and works of reference: Halliburton's Handbook of Physiology; Tigerstedt's Text-book of Physiology, translated by Murlin; Brodie's Essentials of Experimental Physiology; Text-book of Physiology, edited by Schäfer, two volumes; Luciani's Physiology, translated by F. E. Welby; Marshall's Physiology of Reproduction; Swale Vincent's Physiology of the Ductless Glands.

### CHEMISTRY.

W. R. LANG, D.Sc., F.I.C.,	<i>Professor and Director of Chemical Laboratory.</i>
W. L. MILLER, B.A., Ph.D.	<i>Professor of Physical Chemistry.</i>
F. B. KENRICK, M.A., Ph.D.	<i>Associate Professor.</i>
F. B. ALLAN, Ph.D.	<i>Associate Professor of Organic Chemistry.</i>
MISS HANNAH BAMFORD, M.Sc.	<i>Assistant.</i>
R. T. ELWORTHY, B.Sc.	<i>Assistant.</i>
W. S. FUNNELL, B.A.	<i>Assistant.</i>
H. R. BRANDT, B.A.	<i>Assistant.</i>
K. E. BURGESS, B.A.	<i>Assistant.</i>
W. H. MARTIN, B.A.	<i>Assistant.</i>
P. J. MOLONEY, B.A.	<i>Assistant.</i>
N. C. QUA, B.A.	<i>Assistant.</i>
J. G. BURNS	<i>Junior Assistant.</i>
S. J. COOK	<i>Junior Assistant.</i>
A. D. HONE	<i>Junior Assistant.</i>
C. B. LINDSEY	<i>Junior Assistant.</i>
G. O. MORRISON	<i>Junior Assistant.</i>
L. E. WESTMAN	<i>Junior Assistant.</i>

This subject forms part of the course of study required of students proceeding to degrees in Medicine, in the graduating departments in Arts, and to the degree in Forestry. That of Chemistry and Mineralogy is designed for students who propose to become Chemists, or Field Geologists, or to take up academic work or the study of Mining. Opportunity for carrying out original research is provided in the Fourth Year.

Students of the standing of the Fourth Year in Chemistry and Mineralogy, Division I., are accepted as candidates for the degree of B.A.Sc. Thus, students who have passed the Third Year examination may take their Fourth Year in the Faculty of Applied Science and Engineering and obtain the degree of B.A.Sc. Both degrees, B.A. and B.A.Sc., may be obtained in five years.

### Lectures.

The following courses are provided:

1. Elementary Chemistry: An introductory course in general chemistry with experimental illustrations. Two lectures a week during session.

2. Physical Chemistry: For students of the Fourth Year Physiology and Biochemistry.

3a. Elementary Organic Chemistry: A course of experimental lectures on the systematic classification of the fatty hydrocarbons and their derivatives. Lectures explanatory of the benzene theory and of certain more common organic derivatives are included. Two lectures a week during session.

3b. Organic Chemistry. A course of experimental lectures on the hydrocarbons and their derivatives, and on the carbohydrates. Two lectures a week during the Michaelmas Term.

4. Organic Chemistry: The work in Course 3 is reviewed and extended, fuller consideration being given to the isocyclic compounds. Two lectures a week during session.

5. Advanced Organic Chemistry: A course on heterocyclic compounds, synthetic methods and stereochemistry. Two lectures a week during session.

6. History of Chemistry: A short course of lectures, commencing in January, on the development of chemistry and chemical theory.

7. Elementary Physical Chemistry: An experimental course on the elements of chemical mechanics and electrochemistry. Fifty lectures.

8. Elementary Electrochemistry: Twenty-five lectures illustrated by experiments.

9. Physical Chemistry: Theory of solutions, with elementary applications of the calculus to physico-chemical problems. Fifty lectures.

10. Chemical equilibrium, chemical kinetics, and electrochemistry. Fifty lectures.

11. Advanced Physical Chemistry. The Phase rule, and chemical thermodynamics. Sixty-five lectures.

12. Applied Chemistry.

In addition, special instruction will be given to the students of the departments of Chemistry, Geology and Mineralogy, and Physics, as occasion requires.

### Laboratory Work.

13. Elementary quantitative chemistry.

14. Elementary quantitative chemistry (shorter course).

15. Analysis, chemical mechanics and organic preparations. Four hours a week.

16. Quantitative and qualitative analysis.
17. Analysis of minerals and rocks.
18. Analysis, organic preparations and physico-chemical measurements.
19. Practical organic chemistry.
20. Physico-chemical measurements, and electro-chemistry.
21. Research work in general chemistry for advanced students.
22. Research work in physical chemistry for advanced students.
23. Applied chemistry.
24. A short course of physico-chemical measurements, including electrical conductivity, migration, and freezing point of solutions.
25. Electrochemistry, to accompany lecture Course 8.

### **Laboratory Regulations.**

Each student proposing to attend lectures or practical work in the chemical laboratory must apply for a ticket which will have marked on it the number of his seat in the lecture room, of his hat rack, of his working place in the laboratory and of his locker. This ticket will be given only to students presenting their registration ticket, and no working place in the laboratory will be allotted until a deposit of three dollars has been made. Each student will be held responsible for the seat, etc., allotted him, and no change may be made without permission. At the close of the Easter term this ticket must be presented for certificate of attendance.

Each student is provided with a suitable note-book in which to keep an account of the work done by him during the year. These books will be examined from time to time, and marks will be assigned. The student's standing in practical chemistry is based upon these marks, together with those assigned for the practical examinations of the term, and for written examinations on the work.

An account will be kept with each student; all apparatus broken or destroyed and all fines will be charged against his deposit, which must be renewed when exhausted.

The apparatus provided is intended for use in the laboratory only, and may not be removed from the building. At the close of the term's work it must be returned clean and dry.

**GEOLOGY AND PALÆONTOLOGY.**

A. P. COLEMAN, M.A., PH.D.....	<i>Professor.</i>
W. A. PARKS, PH.D.....	<i>Associate Professor.</i>
A. MACLEAN, B.A.....	<i>Lecturer.</i>
A. C. HAZEN, B.A.....	<i>Fellow.</i>

1. Elementary Geology and Physiography: A course of twenty-five lectures is given weekly throughout the session. Works of reference: Scott, Introduction to Geology; Physical Geography, Davis.

2. (a) A course of fifty lectures and (b) fifty hours' practical work, designed to cover the whole field in a general way. Works of reference: As in course No. 1.

3. Historical and Stratigraphical Geology and Palæontology. A course of fifty lectures is given throughout the session. Works of reference: Scott, Introduction to Geology; Geikie, Text-book of Geology.

4. Illustrative practical course to accompany No. 3. A course of thirty hours in the use of maps and sections, and the study of fossils typical of the different formations.

5. Dynamical and Structural Geology: A course of fifty lectures. Works of reference: Geikie, Geology; Chamberlin and Salisbury, Geology.

6. Invertebrate Palæontology: A course of fifty lectures throughout the session. Works of reference: Eastman's translation of Zittel's Text-book of Palæontology; Nicholson, Manual of Palæontology; Steinmann-Döderlein, Elemente der Palæontologie.

7. Invertebrate Palæontology: A course of seventy-five hours' practical work. Works of reference: As in course No. 6: Palæontological Publications of the Geological Survey of Canada, and of the different State surveys; Bulletins and Monographs of the Geological Survey of the United States.

8. Drawing and Cartography: A practical course of fifty hours in the Faculty of Applied Science.

9. Archæan Geology: A course of twenty-five hours throughout the session. Works of reference: Van Hise, Precambrian Geology; Geikie, Text-book of Geology; Reports of the Geological Survey of Canada and of the Bureau of Mines of Ontario.

10. Glacial Geology and Physiography: A course of twenty-five lectures throughout the session. Works of reference: Geikie, Great Ice Age; Penck, Morphologie der Erdoberfläche; De Lapparent, Géographie Physique.

11. Geological Surveying and Cartography: A course of field work and practical work in drafting. Three hours per week throughout the year.

12. Economic Geology: A course of fifty lectures throughout the session. Works of reference: Kemp, The Ore Deposits of the United States and Canada; Tarr, Economic Geology of the United States; Ries, Economic Geology of the United States; Beck, Die Erzlagerstätten; Phillips, Ore Deposits; Reports of the Geological Survey of Canada and of the Bureau of Mines of Ontario.



13. Meteorology: A course of twenty-five lectures. Works of reference: Davis, Elementary Meteorology; Hann, Klimatologie.

14. Vertebrate Palæontology: A course of twenty-five lectures. Works of reference: Woodward, Vertebrate Palæontology; Nicholson and Lydekker, Palæontology; Eastman's Zittel's Palæontology.

15. Stratigraphic Palæontology: A course of seventy-five hours lectures and laboratory work. Works of reference: The publications in the Library of the Department, including various monographs on special subjects and the palæontological reports of the different States and societies.

16. Mining Geology: A course of twenty-five lectures on geological problems associated with mining, typical mining regions in Canada, the United States and elsewhere being discussed from the geological side. Works of reference: As in course No. 9.

17. Practical Economic Geology: A course of fifty hours' laboratory work to illustrate course No. 12.

18. Fifty hours laboratory work on the Geology and Palæontology of the Province of Ontario.

### **MINERALOGY AND PETROGRAPHY.**

T. L. WALKER, M.A., PH.D.....	<i>Professor.</i>
A. L. PARSONS, B.A.....	<i>Assistant Professor.</i>
E. THOMSON, B.A.Sc.....	<i>Demonstrator.</i>
H. V. ELLSWORTH, B.A.....	<i>Fellow.</i>

For students in the Faculty of Arts of the University of Toronto the following courses of lectures and demonstrations have been arranged:

1. Elementary Mineralogy: A course of twenty-five lectures once a week throughout the year. Books of reference: Dana, Minerals and how to study them; Text-book of Mineralogy.

2. A short practical course illustrative of the above, involving twenty hours' laboratory work. Books of reference: As for Course 1.

3. Morphological Crystallography: A course of twenty-five lectures once a week throughout the year. Books of reference: Bayley, Elementary Crystallography; Williams, Crystallography.

4. Blowpipe Analysis and Determinative Mineralogy: A laboratory course of three hours a week throughout the year. Books of reference: Eakle, Mineral Tables; Brush-Penfield, Blowpipe Analysis.

5. Determinative Mineralogy: A laboratory course in continuation of Course 4. Two hours a week. Books of reference: Brush-Penfield, Blowpipe Analysis.

6. Physical Mineralogy: A course of fifty hours' lectures and laboratory work, introducing the student to optical and physical crystallography as a preparation for the study of microscopic petrography. Books of reference: Dana, Text-book of Mineralogy; Bayley, Elementary Crystallography.

7. Practical Crystallography, including goniometric measurements, crystal drawing, projection and calculation with experiments in physical mineralogy. One day a week during the Michaelmas term.

8. Systematic Mineralogy: A course of fifty hours' lectures and laboratory work, being a continuation of courses 1 and 2. Books of reference: Dana, Text-book of Mineralogy; Eakle, Mineral Tables.

9. General Mineralogy: Twenty-five lectures on special subjects to be selected from year to year. Books of reference: Kobell, Geschichte der Mineralogie; Fouqué et Michel-Lévy, Synthèse des Minéraux et des Roches.

10. General Mineralogy: Practical course of seven hours a week throughout the year.

11. Petrography: One hour a week lectures and practical work throughout the session. Books of reference: Kemp, Handbook of Rocks; Harker, Petrography for students.

12. Petrography: Two hours a week devoted to practical petrography, both macroscopic and microscopic. Books of reference: Rosenbusch, Tables for the Determination of Minerals; Rosenbusch-Iddings, Microscopic Physiography; Luquer, Minerals in Rock Sections; Reinisch, Petrographisches Praktikum.

13. Assaying: Laboratory work in the different branches of the subject, occupying three hours a week throughout the session.

14. Advanced Petrography: Twenty-five lectures on the characteristics of the rock-forming minerals and on general petrography. Book of reference: Iddings, Rock Minerals.

The work in Mineralogy is carried on in the new Mineralogical Laboratories in the Chemistry and Mineralogy Building.

## HOUSEHOLD SCIENCE.

### Members of the Faculty of Household Science.

MISS A. L. LAIRD.....	<i>Associate Professor.</i>
MISS E. M. EADIE.....	<i>Lecturer.</i>
MISS N. L. PATTINSON.....	<i>Instructor.</i>
MISS H. A. PAUL, B.A.....	<i>Instructor</i>
MISS L. L. OCKLEY, B.A.....	<i>Laboratory Assistant.</i>
MISS LEXA DENNE, B.A.....	<i>Assistant.</i>

1. History of Home Life: A course of lectures one hour a week throughout the session.

2. Household Management: A course of six hours a week throughout the session. This includes (a) a study of metals, woods, fabrics, etc., used in the home, and the principles underlying their care, (b) the house, (c) the home care of the sick.

3. Foods and Food Values: A course of ten hours a week throughout the session—lectures and laboratory work.

4. Foods: A course of four hours a week throughout the session—lectures and laboratory work.

5. Economics of the Household: A lecture course of two hours a week throughout the session. It includes the economics of spending, the division of the income, etc.

6. Dietetics: A lecture course of two hours a week throughout the session. Methods of investigating the kind and amount of food required under varying conditions are discussed. Practical application of this knowledge is made in the construction of dietaries for different classes of people.

7. An advanced laboratory course of six hours a week throughout the session. It includes practice in marketing and in preparing and serving meals and special diets. Each student is given the opportunity to investigate special problems bearing on her work.

8. Foods: A course of four hours a week throughout the session. This is a continuation of Course 4, and includes practice in preparing meals and special diets.

9. Household Science for General Course students. A course of two hours' lecture and four hours' laboratory work a week throughout the session.

10. Household Science for General Course students. A course of two hours' lecture and four hours' laboratory work a week throughout the session. This is a continuation of Course 9.

11. A one year course in Household Science for occasional students.

12. A First Course in Foods for occasional students—lectures and laboratory work. Two half days a week for one term.

13. A Second Course in Foods for occasional students—lectures and laboratory work. Two half days a week for one term.

14. A course in Invalid Cookery for occasional students. Three hours a week for one term.

15. A course in Home Economics for occasional students.

16. A course in Home Nursing and Emergencies for occasional students. Two hours a week for one term.

17. A course in Household Management for occasional students. Five hours a week for one term.

Post-Graduate Work: Opportunities are offered in the laboratories to graduate students who desire to engage in research work.

Laboratory deposit fee: a deposit of three dollars (\$3.00) is required of each student taking laboratory courses. This amount, minus the cost of equipment and apparatus destroyed, will be returned at the end of the year.

In the Food laboratories students are required to wear plain white aprons, in Household Management laboratories dark ones may be worn.

The number of occasional students that can be admitted is limited.

Books of reference: Food and Dietetics, Hutchison; Practical Dietetics, Thompson; Practical Dietetics, Pattee; Food and Feeding, Watson; Human Foods, Snyder; Selection and Preparation of Foods, Bevier and

Van Meter; Chemistry of Food and Nutrition, Sherman; Principles of Human Nutrition, Jordan; Pure Foods, Olsen; Household Economics, Campbell; Cost of Living, Cost of Shelter, Richards; Chemistry of Cooking and Cleaning, Richards and Elliott; Household Administration, Ravenhill; The Care of a House, Clark; The New Housekeeping, Frederick; The Science of Laundry Work, Rankin; The Art and Practice of Laundry Work, Rankin; Care and Feeding of Children, Holt; Nursing, Its Principles and Practice, Hampton-Robb; Practical Nursing, Maxwell and Pope; Domestic Art in Woman's Education, Cooley; Equipment for Teaching Domestic Science, Kinne; Government Bulletins; Library of Home Economics, Vols. I.-XII.

### RELIGIOUS KNOWLEDGE.

REV. JAMES BALLANTYNE, B.A., D.D.....	Knox College.
REV. T. S. BOYLE, M.A., D.D.....	Trinity College.
W. T. BROWN, M.A., PH.D.....	Victoria College.
REV. NATHANAEL BURWASH, LL.D., F.R.S.C.....	Victoria College.
REV. H. J. CODY, M.A., D.D., LL.D.....	Wycliffe College.
REV. F. H. COSGRAVE, B.A., B.D.....	Trinity College.
REV. T. H. COTTON, M.A.....	Wycliffe College.
REV. R. DAVIDSON, PH.D.....	Knox College.
REV. H. T. F. DUCKWORTH, M.A.....	Trinity College.
D. DUFF, M.A., B.D.....	Trinity College.
REV. A. HAIRE-FORSTER, B.A., B.D.....	Trinity College.
REV. ALFRED GANDIER, M.A., D.D.....	Knox College.
REV. W. T. HALLAM, B.A., B.D.....	Wycliffe College.
S. H. HOOKE, M.A., B.D.....	Victoria College.
REV. A. E. HURLEY.....	St. Michael's College.
REV. ROBERT LAW, M.A., B.D.....	Knox College.
REV. T. C. S. MACKLEM, M.A., D.D., LL.D.....	Trinity College.
REV. J. F. McLAUGHLIN, B.A., B.D.....	Victoria College.
REV. F. D. MEADER, B.A.....	St. Michael's College.
REV. J. H. MICHAEL, M.A.....	Victoria College.
REV. T. R. O'MEARA, B.A., LL.D.....	Wycliffe College.
E. T. OWEN, M.A.....	Trinity College.
REV. W. A. POTTER, B.A., B.D.....	Victoria College.
REV. J. D. ROBERTSON, M.A., D.Sc.....	Knox College.
REV. W. H. GRIFFITH THOMAS, M.A., D.D.....	Wycliffe College.
REV. F. H. WALLACE, M.A., D.D.....	Victoria College.

#### FIRST YEAR—

- 1a. A first course in the English Bible. One hour.
- 1b. A first course in Natural and Revealed Religion. One hour.
- 1c. A first course in the language of the Greek New Testament. Three hours.



## SECOND YEAR—

- 2a. A second course in the English Bible. One hour.
- 2b. A second course in Natural and Revealed Religion. One hour.
- 2c. A second course in the language of the Greek New Testament. Not less than two hours.
- 2d. A course in Church History (Victoria). One hour.

## THIRD YEAR—

- 3a. A third course in the English Bible. Two hours.
- 3b. A third course in Natural and Revealed Religion. Two hours.
- 3c. A first course in the Literature and Language of Greek Testament. Two hours.
- 3d. A course in Church History. Two hours.
- 3e. A first course in the History and Philosophy of Religion. Two hours.

## FOURTH YEAR—

- 4a. A fourth course in the English Bible. Two hours.
- 4b. A fourth course in Natural and Revealed Religion. Two hours.
- 4c. A second course in the Literature and Language of Greek Testament. Two hours.
- 4d. A course in Church History. Two hours.
- 4e. A second course in the History and Philosophy of Religion. Two hours.

NOTE.—In 1a, 2a, 3a and 4a and subject to the same regulations, there may be substituted Oriental Languages 1a, 2a, 3a, and 4a respectively.

**WORLD HISTORY.**

Two courses of reading are provided for the Session 1914-15, viz.:

## THIRD YEAR—

- The Foundations of Science, by W. C. D. Whetham.
- The Dawn of History, by J. L. Myres.
- Man and his Forerunners, by Buttel-Reepen.
- Prehistoric Man, by W. L. H. Duckworth.

Students are recommended to use a Literary and Historical Atlas and Atlas of Ancient and Classical Geography in Everyman's Library in connection with these works.

## FOURTH YEAR—

- (a) Apollo, by Salomon Reinach; or
- (b) How to Judge Architecture.
- The Appreciation of Pictures.
- The Appreciation of Sculpture, by Russell Sturgis,

**TIME-TABLE**

	MONDAY.	TUESDAY.	WEDNESDAY.
8			
9	1 Latin 2 German 3 Ethics 4 English	1 English 2 Latin 3 Rel. Know. 4 Ethics	1 Latin 2 Greek 3 Ethics 4 English
10	1 German 2 French 3 Latin 4 Latin	1 French 2 German 3 English 4 Gk., Ital., Span.	1 German 2 English 3 Anct. Hist. 4 French
11	1 Mathematics 2 Greek 3 Mod. Hist. 4 Rel. Know.	1 Trig. or R. K. 2 Greek 3 Chem., Geol., H. S. 4 Hist. Phil.	1 Hebrew 2 Chemistry 3 Economics 4 Anct. Hist.
12	1 Biology 2 Geology 3 Hist. Phil. 4 Phys., Biol.	1 Physics 2 M. H. or R. K. 3 Phys., Biol., Bioch. 4 Mod. Hist.	1 Anct. History 2 Physics 3 Mod. Hist. 4 Heb., Chem., Geol., H. S.
1			
2	1 French 2 Hebrew 3 †Chem., Geol., H. S. 4 Economics	1 Greek 2 French 3 Ital., Span. 4 †Astr., Physiol., Bioch.	1 †Biology 2 †Physics 3 French 4 German
3	1 Greek 2 †Biology 3 †Chem., Geol., H. S. 4 †Chem., Geol., H.S.	1 Hebrew 2 †Chemistry 3 Economics 4 †Astr., Physiol., Bioch.	1 †Biology 2 †Physics 3 German 4 †Chem., Geol., H. S.
4	2 †Biology 4 †Chem., Geol., H.S.	2 †Chemistry 3 †Phys., Biol., Bioch. 4 †Phys., Biol.	2 Hebrew 3 Gk., Ital., Span. 4 †Chem., H. S.
5	4 Geology	3 †Phys., Biol., Bioch. 4 †Phys., Biol.	

## TIME-TABLE

	THURSDAY.	FRIDAY.	SATURDAY.
8			
9	1 English 2 Latin 3 Hebrew 4 Rel. Know.	1 Latin 2 Hebrew 3 Rel. Know. 4 English	1 Greek 2 Hebrew 3 English 4 French
10	1 Greek 2 French 3 English 4 Ethics	1 German 2 Latin 3 French 4 Anct. Hist.	1 Latin 2 English 3 Greek 4 German
11	1 Hebrew 2 Chemistry 3 Phys., Biol., Bioch. 4 Gk., Ital., Span.	1 Mathematics 2 German 3 Anct. Hist. 4 Phys., Biol.	1 French 2 Latin 3 German 4 Heb., Chem., Geol., H. S.
12	1 Physics 2 Geology 3 Hist. Phil. 4 Mod. Hist.	1 Biology 2 Physics 3 Chem., Geol., H. S. 4 Hist. Phil.	1 German 2 French 3 Hebrew 4 Ital., Span.
1			
2	1 †Physics 2 †Biology 3 Latin 4 Latin	1 French 2 †Geology 3 Ital., Span. 4 Economics	
3	1 †Physics 2 †Biology 3 †Chem., Geol., H. S. 4 †Astr., Physiol., Bioch.	1 Hebrew 2 †Geology 3 †Phys., Biol., Bioch. 4 †Phys., Biol.	
4	2 German 3 †Chem., Geol., H. S. 4 †Astr., Physiol., Bioch.	2 Greek 3 † Phys., Biol., Bioch. 4 †Phys., Biol.	
5			

# **PRESCRIPTION FOR COURSES.**

The courses leading to the degree of Bachelor of Arts are

(a) The General Course.

(b) The following Special Courses:—

Classics.	Physics.
Greek and Hebrew.	Biology.
Oriental Languages.	Biological and Physical Sciences.
Modern Languages.	Physiological and Biochemical
English and History.	Sciences.
Modern History.	Chemistry and Mineralogy.
Political Science.	Geology and Mineralogy.
Commerce and Finance.	Household Science.
Philosophy.	Physiology and Household Science.
Mathematics and Physics.	Arts and Forestry.

The requirements for each of these courses are detailed in the following schedules, where the numerals refer to the corresponding numbers of the courses on the pages indicated.

The paging in the schedules which follow is that of the separate Arts Calendar; in each case add 62 to find the corresponding page in this Calendar.

## **GENERAL COURSE.**

### **First Year.**

1. English 1a, pp. 92, 93	2 hours
2. Latin 1a, p. 85	4 "
3. One of Greek 1a, p. 84	4 "
Hebrew 1b, p. 89	4 "
German 1a, p. 96	4 "
French 1a, p. 98	4 "
4. One of a second language from 3	4 "
Mechanics 1, p. 121, and Physics 9, 10, p. 123	4 "
Biology 1, 2, p. 127	4 "
5. Mathematics 1, 4, pp. 118, 119	2 "
6. One of Greek and Roman History 1, p. 87	1 "
Mathematics 6, p. 119	1 "
Religious Knowledge 1a, or 1b, or 1c, p. 141	1 "

Enrolment in Biology and in Physics of the First Year General Course is limited to the maximum accommodation of the Laboratory. A student for whom the Laboratory work is an essential part of his course shall have precedence over the student from whom the laboratory work is not required by the University.

A student of Chinese birth and education is permitted to substitute Chinese for Latin in the First and Second Years. For such students a special curriculum in Chinese will be prepared.



**Second Year.**

1. English 2a, 2b, p. 93	2 hours
2. Latin 2a, pp. 85, 86	4 "
3. One of Greek 2a, p. 84	4 "
Hebrew 2b, p. 89	4 "
German 2a, p. 96	4 "
French 2a, p. 99	4 "
Italian 2a, p. 100	2 "
Spanish 2a, p. 101	2 "
4. Two of a second language from 3	2 or 4 "
Physics 1, 2, p. 122	4 "
Biology 3, 4, p. 127	4 "
Chemistry 1, 14, p. 135	4 "
Geology 2a, 2b, p. 137	4 "
5. One of History 2a, p. 103	1 "
Religious Knowledge 2a, or 2b, or 2c, or 2d, p. 142	1 "

The subjects of Italian and Spanish are open only to those students who have passed the examinations in Italian and Spanish of the First Year.

In the Second Year the subject of Biology is open only to students who have passed in Biology of the First Year or of an equivalent examination.

Enrolment in Physics, in Biology, in Chemistry and in Geology of the Second Year General Course is limited to the maximum accommodation of the Laboratory. A student for whom the laboratory work is an essential part of his Course shall have precedence over the student from whom the laboratory work is not required by the University.

A student who proposes to take Household Science as an option in the Third and Fourth Years is required to take Chemistry in the Second Year.

**Third and Fourth Years.**

A student in the General Course who is entitled to register in the Third Year is required to submit to the authorities of his College, his selection of subjects for each of the Third and Fourth Years. Registration cannot be completed until the College has formally approved of his selection.

A subject common to the Third and Fourth Years and chosen for the Third Year must be continued in the Fourth Year, unless permission to change the subjects selected is granted by the Council on report of the College in which the student is enrolled.

In the Third Year, the subjects of Biology, Geology and Chemistry are open only to those students who have taken the corresponding courses in the Second Year.

In the Third Year, owing to the nature of the time-table, a student may take one and not more than one subject from each of the following groups: (a) Greek, Italian, Spanish; (b) Physics, Biology, Chemistry and Biochemistry; (c) Chemistry, Geology, Household Science.

In the Fourth Year, the subjects of Biology, Biochemistry, Chemistry, Geology and Household Science are open only to those students who have taken the corresponding courses in the Third Year.

In the Fourth Year, owing to the nature of the time-table, a student may take one and not more than one subject from each of the following groups: (a) Greek, Italian, Spanish; (b) Astronomy, Physiology, Biochemistry; (c) Hebrew, Chemistry, Geology, Household Science.

### Third Year.

Six subjects *or* five subjects for those taking two Sciences.

1. English 3a, p. 93 3 hours
2. One and not more than *three* of:
 

Greek and Roman History 3a, p. 88	3 hours
History 3a, 3d, p. 103	3 "
Political Economy 16, p. 108	3 "
†Philosophy 9, p. 114	3 "
†Philosophy 14, p. 115	3 "
3. Not more than two of:
 

(a) Biology 7, 8, pp. 127, 128	<i>or</i> 6 "
Physics 3b, 5, 6, pp. 122, 123	<i>or</i> 6 "
Chemistry 3b, p. 135 and Biochemistry 12, p. 133	6 "
(b) Chemistry 3a, 15, p. 135	<i>or</i> 6 "
Geology 5, 18, pp. 137, 138 and Mineralogy 6, 138	<i>or</i> 6 "
Household Science 9, p. 140	6 "
4. Not more than two of:
 

Greek 3a, p. 84	2 "
Latin 3a, p. 86	2 "
Hebrew 3b, 3c, p. 90	2 "
German 3a, p. 97	2 "
French 3a, p. 99	2 "
Italian 1a, p. 100 <i>or</i> 3a, 3b, p. 101	<i>or</i> 3 "
Spanish 1a, p. 101 <i>or</i> 3a, p. 101	3 "
5. One of Religious Knowledge 3a, *or* 3b, *or* 3c, *or* 3d, *or* 3e,
 

p. 142	2 "
Second subject from (2)	2 "
Additional language from (4)	2 "

† Course 16, p. 115 may be substituted for Course 9, and Courses 23 and 24 for Course 14, by Students registered in St. Michael's College.

**Fourth Year.**

Six subjects *or* five subjects for those taking two Sciences.

In 1914-1915 a candidate in the Fourth Year may continue all the subjects under groups (2) and (4) in which he has passed the examinations of the Third Year.

1. English 4a, pp. 93, 94 3 hours
  
2. One and not more than three of:
 

Greek and Roman History 4a, p. 88	3	"
History 4a, 4c, p. 103	3	"
Political Economy 31, p. 111	3	"
†Philosophy 26, p. 116	3	"
‡Philosophy 32, p. 116	3	"
  
3. Not more than two of:
 

Mathematics 18, 18a, pp. 119, 120	<i>or</i>	4	"
Physiology (not given in 1914-1915)	<i>or</i>	4	"
Biochemistry 13, p. 133		4	"
(a) Biology 5, Pt. II, 16, pp. 127, 128	<i>or</i>	6	"
Physics, 4, 6, 13, part, pp. 123		6	"
(b) Geology 10, 12, part, 17, pp. 137, 138 and Mineralogy			
8, part, p. 138	<i>or</i>	6	"
‡Chemistry	<i>or</i>	6	"
Household Science 10, p. 140		6	"
  
4. Not more than two of:
 

Greek 4a, p. 85	2	"
Latin 4a, p. 86	2	"
Hebrew 4b, 4c, p. 90	2	"
German 4a, p. 97	2	"
French 4a, p. 99	2	"
Italian 2a, <i>or</i> 4a, 4b, pp. 100, 101	3 <i>or</i> 2	"
Spanish 2a, p. 101 <i>or</i> 4a, p. 102	3 <i>or</i> 2	"
  
5. One of Religious Knowledge 4a, *or* 4b, *or* 4c, *or* 4d, *or* 4e,  
     p. 142 2 "  
     Second subject from (2) 2 "  
     Additional language from (4) 2 "

† Course 36 may be substituted for Course 26, and Courses 43 and 44 for Course 32, by Students registered in St. Michael's College.

‡ Students who have not taken the Chemistry Option of the Third Year may select Chemistry as an option provided that their timetable allows them to take the work provided in the Third Year.

**GENERAL COURSE.**  
**HOUSEHOLD SCIENCE.**

Entrance Requirements, Junior Matriculation. Students are advised to take Experimental Science at Matriculation, and to take Honour Matriculation in three subjects.

**First Year.**

1. English 1a, pp. 92, 93	2	hours
2. Latin 1a, p. 85	4	"
3. One of German 1a, p. 96	4	"
French 1a, p. 98	4	"
4. Biology 1, 2, p. 127	4	"
5. Mathematics 1, 4, pp. 118, 119	2	"
6. One of Greek and Roman History 1, p. 87	1	"
Mathematics 6, p. 119	1	"
Religious Knowledge 1a, <i>or</i> 1b, <i>or</i> 1c, p. 141	1	"
7. Chemistry 1, 14, p. 135	4	"
8. Household Science 1, p. 139	1	"

The standard for the First Year of this course is 40 per cent. on each subject.

**Second Year.**

1. English 2a, 2b, p. 93	2	hours
2. One of German 2a, p. 96	4	"
French 2a, p. 99	4	"
3. One of History 2a, p. 103	1	"
Religious Knowledge 2a, <i>or</i> 2b, <i>or</i> 2c, <i>or</i> 2d, p. 142	1	"
4. Biology 9, 10, 16a, p. 128	4	"
5. Biochemistry 10, p. 133	2	"
6. Chemistry 3a, p. 135	2	"
7. Household Science 2, p. 139	6	"

The standard for the Second Year of this course is 40 per cent. on each subject with an average of 50 per cent.

**CLASSICS.**

**Entrance Conditions.**

A student who proposes to enter the Special Course in Classics is required to obtain at Matriculation or at an equivalent examination, Honour standing in Greek, Latin and at least one of:—English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry.



**First Year.**

English 1a, pp. 92, 93	2 hours
One of German 1a, p. 96	4 "
French 1a, p. 98	4 "
Biology 1, p. 127	2 "
Mechanics 1, p. 121 and Physics 9, p. 123	2 "
Mathematics 1, 4, pp. 118, 119	2 "
And one of Mathematics 6, p. 119	1 "
Biology 2, p. 127	2 "
Physics 10, p. 123	2 "
Religious Knowledge 1a, or 1b, or 1c, p. 141	1 "
*Greek 1b, p. 84	
*Latin 1b, p. 85	
*Greek and Roman History 1, p. 87	

**Second Year.**

One of English 2a, 2b, p. 93	2 hours
German 2a, p. 96	4 "
French 2a, p. 99	4 "
Geology 2a, p. 137	2 "
One of English 2a, 2b, p. 93 (if not already chosen)	2 "
Geology 2b, p. 137	2 "
Religious Knowledge 2a, or 2b, or 2c, or 2d, p. 142	1 "
*Greek 2b, p. 84	
*Latin 2b, p. 86	
*Greek and Roman History 2a, 2b, p. 88	

**Third Year.**

One of Greek 3e, p. 84, and Latin 3d, p. 86	2 hours
Religious Knowledge 3a, or 3b, or 3c, or 3d, or 3e, p. 142	2 "
*Greek 3b, p. 84	
*Latin 3b, p. 86	
*Greek and Roman History 3b, 3d, p. 88	
*Comparative Philology 1, p. 89	

**Fourth Year.**

One of Greek 4e, p. 85, and Latin 4d, p. 87	2 hours
Religious Knowledge 4a, or 4b, or 4c, or 4d, or 4e, p. 142	2 "
*Greek 4b, p. 85	
*Latin 4b, p. 87	
*Greek and Roman History 4b, 4c, 4a, p. 88	

\*Honours.

\*Greek and Latin, any three of 1, 2, 3, 4, 5, 6, 7, 8, 9, p. 87 3 hours

These optional subjects are open only to candidates for the highest honours in Classics.

Special excellence in any one of the three departments of literature and language, philosophy, or history, will be considered in awarding standing in the Fourth Year; but candidates who wish to qualify as classical specialists under the regulations of the Education Department, must give special attention to the first of the three.

Owing to the revision of the Special Courses, which is as yet incomplete, the conditions defining the academic qualifications for Specialist's certificate in Classics for students entering the First Year in October 1914, cannot be definitely announced until after the opening of the Session 1914-1915.

The academic qualifications for Specialist's certificate for students who have completed the First Year in Classics are those defined in the Arts Calendar of 1913-1914, viz., in addition to the Special, or Honour work, a candidate is required to obtain a minimum of 40% in English 1a, German 1a, or French 1a, Mathematics 1, 4, 6, and Biology 1, 2, of the First Year; English 2a, German 2a, or French 2a; History 2a or Political Economy 6, and Geology 2a, and 2b of the Second Year; Greek and Latin Essays of the Third and Fourth Years.

A candidate is required to obtain an average in the Department of at least 50% in the First, Second and Third Years, and at least 66% in the Fourth Year.

## GREEK AND HEBREW.

### Entrance Conditions.

A student who proposes to enter the Special Course in Greek and Hebrew is required to obtain at Matriculation or at an equivalent examination Honour standing in Greek and at least two of:—Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry.

### First Year.

English 1a, pp. 92, 93	2 hours
Latin 1a, p. 85	4 "
Mathematics 1, 4, pp. 118, 119	2 "
One of Mathematics 6, p. 119	1 "
Religious Knowledge 1a, or 1b, or 1c, p. 141	1 "
*Greek 1d, p. 84	
*Greek and Roman History 1, p. 87	
*Oriental Languages 1b, 1c, p. 89	4½ "

\*Honours.

**Second Year.**

English 2a, 2b, p. 93	2 hours
Latin 2a, pp. 85, 86	4 "
One of History 2a, p. 103	1 "
Religious Knowledge 2a, <i>or</i> 2b, <i>or</i> 2c, <i>or</i> 2d, p. 142	1 "
*Greek 2d, p. 84	
*Greek and Roman History, 2a, p. 88	
*Oriental Languages 2b, 2c, 2e, pp. 89, 90	6 "

**Third Year.**

One of English 3a, p. 93	3 hours
Philosophy 14, p. 115	3 "
One of Latin 3a, p. 86	2 "
Religious Knowledge 3a, <i>or</i> 3b, <i>or</i> 3c, <i>or</i> 3d, <i>or</i> 3e, p. 142	2 "
*Greek 3d, 3f, p. 84	
*Oriental Languages 3c, 3d, 3f, 3g, p. 90	5 "

**Fourth Year.**

One of English 4a, pp. 93, 94	3 hours
Philosophy 32, p. 116	3 "
One of Latin 4a, p. 86	2 "
Religious Knowledge 4a, <i>or</i> 4b, <i>or</i> 4c, <i>or</i> 4d, <i>or</i> 4e, p. 142	2 "
*Greek 4d, 4f, p. 85	
*Oriental Languages 4c, 4d, 4f, 4g, p. 90	5 "

**ORIENTAL LANGUAGES.****Entrance Conditions.**

A student who proposes to enter the Special Course in Oriental Languages at the beginning of the Second Year is required to obtain at the examination of the First Year, at least Second Class Standing in the General Course with not less than 66 per cent. in Hebrew. It is recommended that the optional language should be either Greek or German.

It is possible however to transfer from any other Special Course at the beginning of the Second Year, provided the candidate has obtained not less than 66 per cent. in Hebrew.

*\*Honours.*

**First Year.**

English 1a, pp. 92, 93	2 hours
Latin 1a, p. 85	4 "
One of Greek 1a, p. 84	4 "
German 1a, p. 96	4 "
French 1a, p. 98	4 "
Mathematics 1, 4, pp. 118, 119	2 "
One of Mathematics 6, p. 119	1 "
Greek and Roman History 1, p. 87	1 "
†Religious Knowledge 1a, or 1b, or 1c, p. 141	1 "
Hebrew 1b, 1c, p. 89	4½ "

† *Students in this Course, who have not taken Greek, are advised to take Religious Knowledge 1c, and the similar Courses in the subsequent years.*

**Second Year.**

English 2a, 2b, p. 93	2 hours
Latin 2a, pp. 85, 86	4 "
One of Greek 2a, p. 84	4 "
German 2a, p. 96	4 "
French 2a, p. 99	4 "
One of History 2a, p. 103	1 "
Religious Knowledge 2a, or 2b, or 2c, or 2d, p. 142	1 "
*Oriental Languages 2b, 2c, 2d, 2e, pp. 89, 90	9 "

**Third Year.**

One of English 3a, p. 93	3 hours
Greek and Roman History 3a, p. 88	3 "
History, 3a, 3d, p. 103	3 "
Philosophy 14, p. 115	3 "
Two of Greek 3a, p. 84	2 "
German 3a, p. 97	2 "
French 3a, p. 99	2 "
Religious Knowledge 3a, or 3b, or 3c, or 3d, or 3e, p. 142	2 "
*Oriental Languages 3c, 3d, 3e, 3f, 3g, 3h, p. 90	9 "

**Fourth Year.**

One of English 4a, pp. 93, 94	3 hours
Greek and Roman History 4a, p. 88	3 "
History 4a, 4c, p. 103	3 "
Philosophy 32, p. 116	3 "
One of Greek 4a, p. 85	2 "
German 4a, p. 97	2 "
French 4a, p. 99	2 "
Religious Knowledge 4a, or 4b, or 4c, or 4d, or 4e, p. 142	2 "
*Oriental Languages 4c, 4d, 4e, 4f, 4g, 4h, 4i, 4j, pp. 90, 91	11 "

*\*Honours.*



Every candidate in this course shall, during the Fourth Year, present a dissertation on some subject connected with Oriental Languages or Literature, such subject to be previously approved by his instructors in the department. The essay will, on or before the 1st of April in each year, be laid before the instructors in Oriental Languages in University College, Victoria Collège and Trinity College, who will examine it and assign to it marks according to their judgment of its merit. Such marks will be reported to the Registrar and be taken into account by the examiners in determining the standing of the candidate at the examination of the Fourth Year.

### MODERN LANGUAGES.

#### Entrance Conditions.

A student who proposes to enter the Special Course in Modern Languages is required to obtain at Matriculation or at an equivalent examination Honour standing in German, French and at least one of: Greek, Latin, English, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry.

In determining the standing of candidates in English, French, German, Italian and Spanish, examiners will take into account the report of the instructors in the University and Colleges in these subjects.

#### First Year.

Latin 1a, p. 85	4 hours
Mathematics 1, 4, pp. 118, 119	2 "
One of Greek and Roman History 1, p. 87	1 "
Mathematics 6, p. 119	1 "
Religious Knowledge 1a, or 1b, or 1c, p. 141	1 "
*English 1a, pp. 92, 93	2 "
*German 1b, 1c, p. 96	3 "
*French, 1b, p. 98	3 "
One of *Italian 1a, 1b, p. 100	3 "
*Spanish 1a, 1b, p. 101	3 "

#### Second Year.

One of History 2a, p. 103	1 hour
Religious Knowledge 2a, or 2b, or 2c, or 2d, p. 142	1 "
Three of *English 2a, 2c, p. 93	4 hours
*German 2b, 2c, p. 97	3 "
*French 2b, 2c, p. 99	3 "
*Italian 2a, 2b, pp. 100, 101	3 "
*Spanish 2a, 2b, p. 101	3 "
*Phonetics 1, p. 102	1 "

\*Honours.

**Third Year.**

One of Philosophy 9, p. 114	3 hours
Religious Knowledge 3a, or 3b, or 3c, or 3d, or 3e, p. 142	2 "
World History 1, p. 142	2 "
Two of *English 3a, 3c, p. 93	4 "
*German 3b, 3c, p. 97	4 "
*French 3b, 3c, 3d, p. 99	4 "
*Italian 3a, 3b, 3c, 3d, p. 101	4 "
*Spanish 3a, 3b, 3c, pp. 101, 102	4 "
*A third Language of this year	2 "
*Phonetics 1, p. 102	1 "

**Fourth Year.**

One of Philosophy 26, p. 116	3 hours
Religious Knowledge 4a, or 4b, or 4c, or 4d, or 4e, p. 142	2 "
World History 2, p. 142	2 "
Two of *English 4c and either 4a, or 4b, pp. 93, 94	4 "
*German 4b, 4c, 4d, p. 97	4 "
*French 4b, 4c, 4d, pp. 99, 100	4 "
*Italian 4a, 4b, 4c, 4d, p. 101	4 "
*Spanish 4a, 4b, p. 102	4 "
*A third Language of this year	2 "

A candidate is required to continue in the Fourth Year the languages chosen in the Third Year.

Owing to the revision of the Special Courses, which is as yet incomplete, the conditions defining the academic qualifications for Specialists certificate in Modern Languages for students entering the First Year in October 1914, cannot be definitely announced until after the opening of the Session 1914-1915.

The academic qualifications for Specialists certificate for student who have completed the First Year in Modern Languages are those defined in the Arts Calendar for 1913-1914, viz:—in addition to the Special or Honour work in English, German, and French, a candidate is required to obtain a minimum of 40% in Latin 1a, Mathematics 1, 4; Greek and Roman History 1, and Biology 1, 2, of the First Year; Latin 2a, History 2a, and Geology 2a, 2b of the Second Year; History 3a, and Philosophy 9 of the Third Year; English 4a, or History 4a of the Fourth Year.

A candidate is required to obtain an average in the Department of at least 50% in the First, Second, and Third Years, and at least 66% in the Fourth Year.

*\*Honours.*

**ENGLISH AND HISTORY.****Classical Option.****Entrance Conditions.**

A student who proposes to enter the Special Course in English and History (Class.) is required to obtain at Matriculation or at an equivalent examination Honour standing in Greek, Latin, English, and at least one of German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry.

**First Year.**

One of German 1a, p. 96	4 hours
French 1a, p. 98	4 "
Mathematics 1, 4, pp. 118, 119	2 "
One of Greek and Roman History 1, p. 87	1 "
Mathematics, 6, p. 119	1 "
Religious Knowledge 1a, or 1b, or 1c, p. 141	1 "
*Greek 1c, p. 84	4½ "
*Latin 1c, p. 85	4½ "
*English 1a, pp. 92, 93	2 "

**Second Year.**

One of Political Economy 6, p. 107	1 hour
Religious Knowledge 2a, or 2b, or 2c, or 2d, p. 142	1 "
*Greek 2c, p. 84	3 hours
*Latin 2c, p. 86	5 "
*English 2a, 2c, p. 93	4 "
*History 2a, 2b, 6, p. 103	2 "

**Third Year.**

One of Philosophy 9, p. 114	3 hours
Religious Knowledge 3a, or 3b, or 3c, or 3d, or 3e, p. 142	2 "
*Greek 3c, p. 84	2 "
*English 3a, 3b, p. 93	4 "
*History 3a, 3b, 6, p. 103	3 "
One of *English 3c, p. 93	2 "
*Latin 3c, p. 86 and History 8, p. 103	2 "
*Greek 3g, p. 84 and History 8, p. 103	2 "

*\*Honours.*

**Fourth Year.**

One of Philosophy 26, p. 116	3 hours
Religious Knowledge 4a, <i>or</i> 4b, <i>or</i> 4c, <i>or</i> 4d, <i>or</i> 4e, p. 142	2 "
*Greek 4c, p. 85	1 "
*English, two of 4a, 4b, 4d, pp. 93, 94	4 "
*History 4a, 4b, 6, p. 103	3 "
One of *English 4c, p. 94	3 "
*Latin 4c, p. 87 and History 8, p. 103	2 "
*Greek 4g, p. 85 and History 8, p. 103	2 "

Owing to the revision of the Special Courses, which is as yet incomplete, the conditions defining the academic qualifications for Specialists certificate in English and History with the Classical Option for students entering the First Year in October 1914, cannot be definitely announced until after the opening of the Session 1914-1915.

The academic qualifications for Specialists certificate for students who have completed the First Year in English and History, with the Classical Option are those defined in the Arts Calendar for 1913-1914, viz:—in addition to the Special, or Honour work, a candidate is required to obtain a minimum of 40% in German 1a, or French 1a, Mathematics 1, 4, 6; and Biology 1, 2, of the First Year; German 2a, or French 2a, Political Economy 6, and Geology 2a, 2b, of the Second Year; Philosophy 9 of the Third Year; and Philosophy 26 of the Fourth Year.

A candidate is required to obtain an average in the Department of at least 50% in the First, Second, and Third Years, and at least 66% in the Fourth Year.

**ENGLISH AND HISTORY.**

**Modern Option.**

**Entrance Conditions.**

A student who proposes to enter the Special Course in English and History (Mods.) is required to obtain at Matriculation or at an equivalent examination Honour standing in Latin, German, French, and one of English, Algebra and Geometry, Trigonometry, Biology, Physics, Chemistry.

**First Year.**

Mathematics 1, 4, pp. 118, 119	2 hours
One of Mathematics 6, p. 119	1 "
Religious Knowledge 1a, <i>or</i> 1b, <i>or</i> 1c, p. 141	1 "
*Latin 1d, p. 85	3 "
*Greek and Roman History 1, p. 87	1 "
*English 1a, pp. 92, 93	2 "
*German 1b, 1c, p. 96	3 "
*French 1b, p. 98	3 "

*\*Honours.*



**Second Year.**

One of Political Economy 6, p. 107	1 hour
Religious Knowledge 2a, or 2b, or 2c, or 2d, p. 142	1 "
*English 2a, 2c, p. 93	4 hours
*German 2b, 2c, p. 97	3 "
*French 2b, 2c, p. 99	3 "
*History 2a, 2b, 6, p. 103	2 "

**Third Year.**

One of Philosophy 9, p. 114	3 hours
Religious Knowledge 3a, or 3b, or 3c, or 3d, or 3e, p. 142	2 "
*English 3a, 3b, 3c, p. 93	6 "
*History 3a, 3b, 6, p. 103	3 "
One of *German 3b, p. 97	2 "
*French 3b, p. 99	2 "

**Fourth Year.**

One of Philosophy 26, p. 116	3 hours
Religious Knowledge 4a, or 4b, or 4c, or 4d, or 4e, p. 142	2 "
*English 4a, 4b, 4c, 4d, pp. 93, 94	8 "
*History 4a, 4b, 6, p. 103	3 "

Owing to the revision of the Special Courses, which is as yet incomplete, the conditions defining the academic qualifications for Specialist's certificate in English and History, with the Moderns Option, for students entering the First Year in October, 1914, cannot be definitely announced until after the opening of the Session 1914-1915.

The academic qualifications for Specialist's certificate for students who have completed the First Year in English and History, with the Moderns Option, are those defined in the Arts Calendar for 1913-1914, viz:—in addition to the Special, or Honour work, a candidate is required to obtain a minimum of 40% in Mathematics 1, 4, 6, and Biology 1, 2, of the First Year; Political Economy 6, and Geology 2a, 2b, of the Second Year; Philosophy 9 of the Third Year; and Philosophy 26 of the Fourth Year.

A candidate is required to obtain an average in the Department of at least 50% in the First, Second, and Third Years, and at least 66% in the Fourth Year.

**MODERN HISTORY.****Entrance Conditions.**

A student who proposes to enter the Special Course in Modern History is required to obtain at Matriculation or at an equivalent examination Honour standing in three of: Greek, Latin, English, German, French, Mathematics.

*\*Honours.*

**First Year.**

Latin 1a, p. 85	4 hours
One of Greek 1a, p. 84	4 "
German 1a, p. 96	4 "
French 1a, p. 98	4 "
Mathematics 1, 4, pp. 118, 119	2 "
One of Mathematics 6, p. 119	1 "
Religious Knowledge 1a, <i>or</i> 1b, <i>or</i> 1c, p. 141	1 "
One of *Greek 1c, p. 84	3 "
*Latin 1b, p. 85	4½ "
*German 1b, 1c, p. 96	3 "
*French 1b, p. 98	3 "
*Greek and Roman History 1, p. 87	1 "
*English 1a, pp. 92, 93	2 "
*History 1, 5, p. 103	1 "

Honour standing in Greek or Latin or German or French will relieve a candidate of the corresponding language of the General Course subjects.

**Second Year.**

One of Greek 2a, p. 84	4 hours
Latin 2a, pp. 85, 86	4 "
German 2a, p. 96	4 "
French 2a, p. 99	4 "
One of History 5, p. 103	1 "
Religious Knowledge 2a, <i>or</i> 2b, <i>or</i> 2c, <i>or</i> 2d, p. 142	1 "
One of *Greek 2c, p. 84	3 "
*Latin 2b, p. 86	5 "
*German 2b, 2c, p. 97	3 "
*French 2b, 2c, p. 99	3 "
*English 2a, 2b, p. 93	2 "
*History 2a, 2b, 2c, 6, p. 103	4 "
*Political Economy 1a, 1b, 3, p. 106	2 "

Honour standing in Greek or Latin or German or French will relieve a candidate of the corresponding language of the General Course.

The honour language of the First Year must be continued in the Second Year.

**Third Year.**

One of History 5, p. 103	2 hours
Religious Knowledge 3a, <i>or</i> 3b, <i>or</i> 3c, <i>or</i> 3d, <i>or</i> 3e, p. 142	2 "
*English 3a, p. 93	3 "
*History 3a, 3b, 3c, 6, 7, 8, p. 103	6 "
*Political Economy 1b, 15, pp. 106, 108	1 "
*Constitutional Law 3, 4, p. 112	2 "

*\*Honours.*

**Fourth Year.**

One of History 5	2 hours
Religious Knowledge 4a, or 4b, or 4c, or 4d, or 4e, p. 142	2 "
*English 4a, pp. 93, 94	3 "
*History 4a, 4b, 4c, 6, 7, 8, p. 103	6 "
*Political Economy 1b, 17, pp. 106, 109	1 "
*Constitutional Law 1, p. 111	2 "

**POLITICAL SCIENCE.****Entrance Conditions.**

A student who proposes to enter the Special Course in Political Science is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which one must be a Foreign Language.

A candidate who is awarded Second Class standing, i.e., an average of sixty per cent. in the General Course may in the Second Year proceed in the Special Course in Political Science.

**First Year.****COURSE A.**

1. English 1a, pp. 92, 93	2 hours
2. Latin 1a, p. 85	4 "
3. One of Greek 1a, p. 84	4 "
Hebrew 1b, p. 89	4 "
German 1a, p. 96	4 "
French 1a, p. 98	4 "
4. One of a second language from 3	4 "
Mechanics 1, p. 121, and Physics 9, 10, p. 123	4 "
Biology 1, 2, p. 127	4 "
5. Mathematics 1, 4, pp. 118, 119	2 "
6. One of Greek and Roman History 1, p. 87	1 "
Mathematics 6, p. 119	1 "
Religious Knowledge 1a, or 1b, or 1c, p. 141	1 "

*\*Honours.*

COURSE B.

Latin 1a, p. 85	4 hour
One of Greek 1a, p. 84	4 "
German 1a, p. 96	4 "
French 1a, p. 98	4 "
Mathematics 1, 4, pp. 118, 119	2 "
One of Greek and Roman History 1, p. 87	1 "
Mathematics 6, p. 119	1 "
Religious Knowledge 1a, <i>or</i> 1b, <i>or</i> 1c, p. 141	1 "
One of *Greek 1c, p. 84	4 "
*Latin 1b, p. 85	4 "
*German 1b, 1c, p. 96	3 "
*French 1a, p. 98	3 "
*English 1a, pp. 92, 93	2 "
*History 1, 5, p. 103	1 "
*Political Economy 2, p. 106	1 "

Honour standing in Greek or Latin or German or French will relieve a candidate of the corresponding language of the General Course subjects.

Second Year.

English 2a, 2b, p. 93	2 hours
One of Greek 2a, p. 84	4 "
Latin 2a, pp. 85, 86	4 "
Hebrew 2b, p. 89	4 "
German 2a, p. 96	4 "
French 2a, p. 99	4 "
One of Political Economy Essays	1 "
Religious Knowledge 2a, <i>or</i> 2b, <i>or</i> 2c, <i>or</i> 2d, p. 142	1 "
*Greek and Roman History 2b, p. 88	
*History 2a, 2c, 6, p. 103	
*Political Economy 1a, 1b, 3, 4, 5, pp. 106, 107	
*Actuarial Science 1, p. 121	1 "

Third Year.

English 3a, p. 93	3 hours
Philosophy 14, p. 115	3 "
One of Religious Knowledge 3a, <i>or</i> 3b, <i>or</i> 3c, <i>or</i> 3d, <i>or</i> 3e, p. 142	2 "
World History 1, p. 142	2 "
*History 3a, 3c, 6, p. 103	
*Political Economy 1a, 1b, 7, 8, 9, 10, 11, 13, 15, pp. 106, 108	
*Constitutional Law 3, 4, p. 112	
*Law 1, 2, pp. 112, 113	

\*Honours.



**Fourth Year.**

English 4a, pp. 93, 94	2 hours
One of Religious Knowledge 4a, <i>or</i> 4b, <i>or</i> 4c, <i>or</i> 4d, <i>or</i> 4e, p. 142	2 "
World History 2, p. 142	
*History 4a, 4c, 6, p. 103	
*Political Economy 1a, 1b, 17, 18, 19, 20, 22, 24, 25, 26, 27, 28, 29, pp. 106, 110.	
*Constitutional Law 1, 2, pp. 111, 112	
*Law 3, p. 113	

**COMMERCE AND FINANCE.****Entrance Conditions.**

A student who proposes to enter the Special Course in Commerce and Finance is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which one must be a Foreign Language.

**First Year.**

Latin 1a, p. 85	4 hours
One of German 1a, p. 96	4 "
French 1a, p. 98	4 "
Mechanics 1, p. 121 and Physics 9, 10, p. 123	4 "
Mathematics 1, 4, pp. 118, 119	2 "
One of Greek and Roman History 1, p. 87	1 "
Mathematics 6, p. 119	1 "
Religious Knowledge 1a, <i>or</i> 1b, <i>or</i> 1c, p. 141	1 "
*English 1a, pp. 92, 93	2 "
*History 1, 5, p. 103	1 "
*Political Economy 2, p. 106	1 "
*Actuarial Science 1, 2, p. 121	2 "

**Second Year.**

English 2a, 2b, p. 93	2 hours
Two of Latin 2a, pp. 85, 86	4 "
German 2a, p. 96	4 "
French 2a, p. 99	4 "
Mathematics 12, p. 119	2 "
Physics 1, 2, p. 122	4 "
Chemistry 1, 14, p. 135	4 "
Geology 2a, 2b, p. 137	4 "
One of History 2a, p. 103	1 "
Mechanics 9, p. 121	1 "

*\*Honours.*

**Second Year—Con.**

Geology 1, p. 137	1 hour
Religious Knowledge 2a, <i>or</i> 2b, <i>or</i> 2c, <i>or</i> 2d, p. 142	1 "
*Political Economy 1a, 1b, 3, 4, 5, pp. 106, 107	
*Actuarial Science 3, 4, 5, p. 121	
One of the languages of the First Year must be continued in the Second Year	2½ "

**Third Year.**

English 3a, p. 93	3 hours
One of Latin 3a, p. 86	2 "
German 3a, p. 97	2 "
French 3a, p. 99	2 "
Italian 1a, p. 100 <i>or</i> Spanish 1a, p. 107	3 "
Physics 3, 5, pp. 122, 123	6 "
Chemistry 3a, 15, p. 135	6 "
Geology 5, 18, pp. 137, 138, and Mineralogy 6, p. 138	6 "
One of History 3a, 3d, p. 103	3 hours
Religious Knowledge 3a, <i>or</i> 3b, <i>or</i> 3c, <i>or</i> 3d, <i>or</i> 3e, p. 142	2 "
World History 1, p. 142	2 "
One of *Political Economy 9, 10, 13, 14, pp. 107, 108	
*Actuarial Science 6, 7, p. 121	
*Political Science 1a, 1b, 7, 8, 11, 12, 15, 33, pp. 106-111	
The Chemistry option is open only to those who have taken Chemistry in the Second Year.	

**Fourth Year.**

English 4a, pp. 93, 94	3 hours
One of Latin 4a, p. 86	2 "
German 4 a, p. 97	2 "
French 4a, p. 99	2 "
Italian 2a, <i>or</i> 4a, 4b, p. 100 <i>or</i> Spanish 2a, <i>or</i> 4a, pp. 101, 102	3 "
Physics 4, 13, part, pp. 123	6 "
Chemistry (not given in 1914-1915)	6 "
Geology 10, 12 part, 17, pp. 137, 138 and Mineralogy 8 part, p. 138	6 "
One of History 4a, 4c, p. 103	2 "
Religious Knowledge 4a, <i>or</i> 4b, <i>or</i> 4c, <i>or</i> 4d, <i>or</i> 4e, p. 142	2 "
World History 2, p. 142	
One of *Political Economy 20, 21, p. 109	
*Actuarial Science 8, p. 121	
*Political Science 1a, 1b, 17, 18, 19, 22, 23, 24, 25, 26, 27, 30, pp. 106-111.	

The Chemistry option is open only to those who have taken Chemistry in the Third Year.

*\*Honours.*

**PHILOSOPHY.**

The special work of the course in Philosophy begins in the Second Year. A candidate who has fulfilled the requirements of the First Year in any of the Special Courses or who has been awarded first or second class standing or has completed the General Course of the First Year may enter the Special Course in Philosophy of the Second Year. A student who at the outset of his course has decided to enter this Course is strongly recommended to take, in the First Year, Greek, German, Mechanics and Physics.

**First Year.**

1. English 1a, pp. 92, 93	2 hours
2. Latin 1a, p. 85	4 "
3. One of Greek 1a, p. 84	4 "
Hebrew 1b, p. 89	4 "
German 1a, p. 96	4 "
French 1a, p. 98	4 "
4. One of a second language from 3.	
Mechanics 1, p. 121 and Physics 9, 10, p. 123	4 "
Biology 1, 2, p. 127	4 "
5. Mathematics 1, 4, pp. 118, 119	2 "
6. One of Greek and Roman History 1, p. 87	1 "
Mathematics 6, p. 119	1 "
Religious Knowledge 1a, or 1b, or 1c, p. 141	1 "

**Second Year.**

English 2a, 2b, p. 93	2 hours
One of Greek 2a, p. 84	4 "
Latin 2a, pp. 85, 86	4 "
Hebrew 2b, p. 89	4 "
German 2a, p. 96	4 "
French 2a, p. 99	4 "
One of Physics 1, 2, p. 122	1½ "
†Chemistry 1, 14, p. 135	4 "
One of History 2a, p. 103	1 "
Religious Knowledge 2a, or 2b, or 2c, or 2d, p. 142	1 "
*Philosophy 1, 2, 3, 4, p. 114	or
*Philosophy 5, 6, 7, 8, p. 114	
† Chemistry is open only to candidates registering in St. Michael's College.	

**Third Year.**

English 3a, p. 93	3 hours
One of Hebrew 3b, 3c, p. 90	2 "
German, Philosophical Texts	2 "
Religious Knowledge 3a, or 3b, or 3c, or 3d, or 3e, p. 142	2 "
Political Economy 7, 8, p. 107	
*Philosophy 10, 11, 12, 13, 15, pp. 114, 115	or
*Philosophy 17, 18, 19, 20, 21, 22, 23, 24, 25, pp. 115-116.	

*\*Honours.*

**Fourth Year.**

English 4a, pp. 93, 94	3 hours
One of Hebrew 4b, 4c, p. 90	2 "
German Philosophical Texts	2 "
Religious Knowledge 4a, <i>or</i> 4b, <i>or</i> 4c, <i>or</i> 4d, <i>or</i> 4e, p. 142	2 "
*Philosophy 27, 28, 29, 30, 31, 33, 34, pp. 116, 117 <i>or</i>	
*Philosophy 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, p. 117	

**MATHEMATICS AND PHYSICS.**

**Entrance Conditions.**

A student who proposes to enter the Special Course in Mathematics and Physics is required to obtain at Matriculation or at an equivalent examination Honour standing in Mathematics and at least one of: Greek, Latin, English, German, French, Physics, Biology, Chemistry.

**First Year.**

English 1a, pp. 92, 93	2 hours
Latin 1a, p. 85	4 "
One of German 1a, p. 96	4 "
French 1a, p. 98	4 "
One of Greek and Roman History 1, p. 87	1 "
Religious Knowledge 1a, <i>or</i> 1b, <i>or</i> 1c, p. 141	1 "
*Mathematics 8, 9, 10, 11, p. 119	6 "
*Mechanics 1, p. 121	1 "
*Actuarial Science 1, p. 121	1 "
*Physics, 1, 2, p. 122	5 "
*Chemistry 1, 14, p. 135	4 "

**Second Year.**

English 2a, 2b, p. 93	2 hours
One of German 2a, p. 96	4 "
French 2a, p. 99	4 "
One of History 2a, p. 103	1 "
Religious Knowledge 2a, <i>or</i> 2b, <i>or</i> 2c, <i>or</i> 2d, p. 142	1 "
*Mathematics 13, 14, 15, p. 119	6 "
One of *Mathematics 16, p. 119	
*Actuarial Science 4, 5, p. 121	1½ "
*Mechanics 2, p. 121	
*Physics 3a, 4, 5, 6, pp. 122-123	

*\*Honours.*



**Third Year.**

One of History 3a, 3d, p. 103	3 hours
Mathematics 18, p. 119	2 "
Religious Knowledge 3a, or 3b, or 3c, or 3d, or 3e, p. 142	2 "
World History 1, p. 142	2 "
*Mathematics 17, 21, pp. 119-120	1 "
One of *Actuarial Science 6, 7, p. 121	1 1/5 "
*Physics 15, p. 123	1 1/5 "
*Mechanics 3, 4, 5, p. 121	4 2/5 "
*Physics 12, 13, 14, 17, pp. 123, 124	9 2/5 "

**Fourth Year.**

One of History 4a, 4c, p. 103	2 hours
Mathematics 18, p. 119	2 "
Religious Knowledge 4a, or 4b, or 4c, or 4d, or 4e, p. 142	2 "
World History 2, p. 142	2 "
MATHEMATICS DIVISION.	
*Six of Mathematics 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, p. 120, the choice to be determined by the Department	12 "
One of *Mathematics 32, p. 121	
*Actuarial Science 8, p. 121	
PHYSICS DIVISION.	
One of *Mechanics 7, p. 121	1/2 "
*Mineralogy 6 (lectures), p. 138	
*Physics 18, 19, 21, 22 or 24, 23, 26, 28, pp. 124, 125	7 1/4 "
ASTRONOMY AND PHYSICS DIVISION.	
*Mathematics 19, 20, 22, p. 120	6 3/5 "
*Mechanics 6, 7, p. 121	2 1/4 "
*Physics 19, 20, 28 ( <i>Light</i> ), 29, 30, pp. 124, 125	10 1/2 "

The option between Mathematics 18 or Religious Knowledge or World History may be exercised in either the Third or the Fourth Year but not in both.

Candidates in the Astronomy and Physics Division are required to take the lectures of Course 19 during the Michaelmas Term and laboratory work in Optics of Course 28 for two afternoons a week during the Michaelmas Term.

Owing to the revision of the Special Courses, which is as yet incomplete, the conditions defining the academic qualifications for Specialist's certificate in Mathematics and Physics for students entering the First Year in October, 1914, cannot be definitely announced until after the opening of the Session 1914-1915.

*\*Honours.*

The academic qualifications for Specialist's certificate for students who have completed the First Year in Mathematics and Physics are those defined in the Arts Calendar for 1913-1914, viz:—in addition to the Special, or Honour work, a candidate is required to obtain a minimum of 40% in Latin 1a, English 1a, German 1a, or French 1a, and Biology 1, 2, of the First Year; English 2a, 2b, German 2a, or French 2a, Geology 2a, 2b, of the Second Year; History 3a of the Third Year; History 4a, and in the case of the Physics Option, a minimum of 50% in Mineralogy 6 (Lectures) instead of Mechanics 7 of the Fourth Year.

A candidate is required to obtain an average in the Department of at least 50% in the First, Second, and Third Years, and at least 66% in the Fourth Year.

## PHYSICS.

### Entrance Conditions.

A student who proposes to enter the Special Course in Physics is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation, and to select French as one of the three subjects in which Honour standing is required for entrance upon this course.

### First Year.

English 1a, pp. 92, 93	2	hours
Latin 1a, p. 85	4	"
German 1a, p. 96	4	"
Mathematics 1, 4, pp. 118, 119	2	"
One of Mathematics 6, p. 119	1	"
Religious Knowledge 1a or 1b or 1c, p. 141	1	"
*Mechanics 1, p. 121	1	"
*Physics 1, 2, p. 122	5	"
*Biology 1a, 3, 4, p. 127	6	"
*Chemistry 1, 13, p. 135	6	"

### Second Year.

One of English 2a, 2b, p. 93	2	hours
German 2a, p. 96	4	"
Geology 1, p. 137	1	"
Religious Knowledge 2a or 2b, or 2c or 2d, p. 142	1	"
*Mathematics 8, 12, p. 119	4	"
*Physics 3a, 4, 5, 6, 7, pp. 122, 123	9	"
*Chemistry 3a, 7, 15, 24, pp. 135, 136	8	"

*\*Honours.*

**Third Year.**

One of English 3a, p. 93	3 hours
History 3a, 3d, p. 103	3 "
Religious Knowledge 3a, <i>or</i> 3b, <i>or</i> 3c, <i>or</i> 3d <i>or</i> 3e, p. 142	2 "
World History 1, p. 142	2 "
*Mathematics 15 (first half), p. 119	1 "
*Mechanics 3, 4, 5, p. 121	4 $\frac{2}{5}$ "
*Physics 12, 13, 14, 15, 17, pp. 123, 124	

**Fourth Year.**

One of English 4a, pp. 93, 94	3 hours
Religious Knowledge 4a, <i>or</i> 4b, <i>or</i> 4c, <i>or</i> 4d <i>or</i> 4e, p. 142	2 "
World History 2, p. 142	2 "
*Mathematics 21, p. 120	
One of *Mechanics 7, p. 121	
*Geology 3, 4, p. 137	
One of *Physics 22 <i>or</i> 24, p. 124	
*Mineralogy 1, 4, p. 138	
*Physics 18, 19, 21, 23, 26, 28, pp. 124, 125	

Owing to the revision of the Special Courses, which is as yet incomplete, the conditions defining the academic qualifications for Specialists' certificates in Mathematics and Science, for students entering the First Year in October, 1914, cannot be definitely announced until after the opening of the Session 1914-1915.

The academic qualifications for Specialists' certificates for students who have completed the First Year in Mathematics and Science are those defined in the Arts Calendar for 1913-1914, viz., in addition to the Special, or Honour, work a candidate is required to obtain a minimum of 40% in Latin 1a, English 1a, German 1a, French 1a (Texts only), and Mathematics 1, 4, 6 of the First Year; English 2a, 2b, German 2a (Texts only), French 2a (Texts only), Geology 1, of the Second Year; English 3a, or History 3a, of the Third Year; English 4a, of the Fourth Year. In addition a candidate is required to secure a minimum of 50% in Mathematics 9, 10, 13, 14; Biology 7, 8, 12, 18; Geology and Palaeontology 3, 4; and Mineralogy 1, 4.

A candidate is required to obtain an average in the Department of at least 50% in the First, Second, and Third Years, and at least 66% in the Fourth Year.

*\*Honours.*

# **BIOLOGY.**

## **Entrance Conditions.**

A student who proposes to enter the Special Course in Biology is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation, and to select French as one of the three subjects in which Honour standing is required for entrance upon this course.

## **First Year.**

English 1a, pp. 92, 93	2 hours
Latin 1a, p. 85	4 "
German 1a, p. 96	4 "
Mathematics 1, 4, pp. 118, 119	2 "
One of Mathematics 6, p. 119	1 "
Religious Knowledge 1a, or 1b, or 1c, p. 141	1 "
*Mechanics 1, p. 121	1 "
*Physics 1, 2, p. 122	5 "
*Biology 1a, 3, 4, p. 127	6 "
*Chemistry 1, 13, p. 135	6 "

## **Second Year.**

English 2a, 2b, p. 93	2 hours
One of Geology 1, p. 137	1 "
Religious Knowledge 2a, or 2b, or 2c, or 2d, p. 142	1 "
*Physics 3b, 4, 5, 6, pp. 122, 123	7 "
*Biology 7, 8, 29, pp. 127, 128, 130	7 "
*Chemistry 3a, 7, 15, 24, pp. 135, 136	6 "
*Geology and Palaeontology 3, 4, p. 137	3 "
*Mineralogy and Petrography 1, 2, p. 138	2 "

## **Third Year.**

English 3a, p. 93	3 hours
One of Religious Knowledge 3a, or 3b, or 3c, or 3d, or 3e, p. 142	2 "
World History 1 p. 142	2 "
*Biology 5, 6, 12, 13, 14, 16, 17, 18, 29, pp. 127-130	19 "
*Biochemistry 1, p. 132	2 "
*Physiology 1, 6, p. 133	5 "

*\*Honours.*



## Fourth Year.

English 4a, pp. 93, 94	3	hours
One of Religious Knowledge 4a, or 4b, or 4c, or 4d, or 4e, p. 142	2	"
World History 2, p. 142	2	"
*Biology 19, 23, 24, 29, pp. 129, 130		
One of the following divisions:		
<i>Division I.</i> Zoology, Histology, Embryology.		
Biology 15 (Histology), p. 128	4	"
Biology 20 (Embryology), p. 129	4	"
One of Biology 26 (Vert. Zool.), p. 130	4	"
Biology 27 (Invert. Zool.), p. 130	4	"
Biology 28 (System. Zool.), p. 130	4	"
The two remaining subjects of 3 or Special work in any one subject of the Division	8	"
<i>Division II.</i> Botany.		
Biology 30 (Ecology), p. 130	4	"
Biology 31 (Phan. Bot.), p. 130	4	"
Biology 32 (Crypt. Bot.), p. 130	4	"
Special work in any one subject of the Division	8	"
<i>Division III.</i> General Biology (five subjects).		
Biology (Zoology), 2 or 3 subjects of Division I.	8 or 12	"
Biology (Botany), 3 or 2 subjects of Division II.	12 or 8	"
<i>Division IV.</i> Teachers' Course.		
Geology and Palæontology, 6 and 7, p. 137	4	"
Mineralogy and Petrography 4, p. 138	4	"
Biology 10, 33 (Botany), pp. 128, 130	4	"
Biology 28 (System. Zool.), p. 130		
Any one course in Div. I (Zoology) or Div. II (Botany)	4	"

Owing to the revision of the Special Courses, which is as yet incomplete, the conditions defining the academic qualifications for Specialists' certificates in Science (Biology) for students entering the First Year in October, 1914, cannot be definitely announced until after the opening of the Session 1914-1915.

The academic qualifications for Specialists' certificates for students who have completed the First Year in Science (Biology) are those defined in the Arts Calendar for 1913-1914, viz., in addition to the Special, or Honour, work a candidate is required to obtain a minimum of 40% in Latin 1a, English 1a, German 1a, French 1a (Texts only), Mathematics 1, 4, 6, of the First Year; English 2a, 2b, German 2a, French 2a (Texts only), and Geology 1, of the Second Year; English 3a, and History 3a, of the Third Year; English 4a, and History 4a, of the Fourth Year.

A candidate is required to obtain an average in the Department of at least 50% in the First, Second, and Third Years, and at least 66% in the Fourth Year.

\**Honours.*

**BIOLOGICAL AND PHYSICAL SCIENCES.**

**Entrance Conditions.**

A student who proposes to enter the Special Course in Biological and Physical Sciences is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation and to select French as one of the three subjects in which Honour standing is required for entrance upon this course.

**First Year.**

English 1a, p. 93	2 hours
Latin 1a, p. 85	4 "
German 1a, p. 96	4 "
Mathematics 1, 4, pp. 118, 119	2 "
One of Mathematics 6, p. 119	1 "
Religious Knowledge 1a, or 1b, or 1c, p. 141	1 "
*Mechanics 1, p. 121	1 "
*Physics 1, 2, p. 122	5 "
*Biology 1a, 3, 4, p. 127	6 "
*Chemistry 1, 13, p. 135	6 "

**Second Year.**

English 2a, 2b, p. 93	2 hours
One of Geology 1, p. 137	1 "
Religious Knowledge 2a, or 2b, or 2c, or 2d, p. 142	1 "
*Physics 3b, 4, 5, 6, pp. 122, 123	7 "
*Biology 5, 6, p. 127	8 "
*Chemistry 3a, 7, 15, 24, pp. 135, 136	8 "

**Third Year.**

One of Religious Knowledge 3a, or 3b, or 3c, or 3d, or 3e, p. 142	2 hours
World History 1, p. 142	2 "
*Biology 11, 13, 14, p. 128	8 "
*Anatomy 1, 2, p. 132	10 "
*Biochemistry 1, p. 132	2 "
*Physiology 1, 5, p. 133	6 "

**Fourth Year.**

One of Religious Knowledge 4a, or 4b, or 4c, or 4d, or 4e, p. 142	2 "
World History 2, p. 142	2 "
*Biology 19, 20, 21, 22, p. 129	7 "
*Anatomy 3, p. 132	12 "
*Biochemistry 5, p. 133	5 "

*\*Honours.*

**PHYSIOLOGICAL AND BIOCHEMICAL SCIENCES.****Entrance Conditions.**

A student who proposes to enter the Special Course in Physiological and Biochemical Sciences is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation and to select French as one of the three subjects in which Honour standing is required for entrance upon this course.

**First Year.**

English 1a, pp. 92, 93	2 hours
Latin 1a, p. 85	4 "
German 1a, p. 96	4 "
Mathematics 1, 4, pp. 118, 119	2 "
One of Mathematics 6, p. 119	1 "
Religious Knowledge 1a, <i>or</i> 1b, <i>or</i> 1c, p. 141	1 "
*Mechanics 1, p. 121	1 "
*Physics 1, 2, p. 122	5 "
*Biology 1a, 3, 4, p. 127	6 "
*Chemistry 1, 13, p. 135	6 "

**Division I.****Second Year.**

English 2a, 2b, p. 93	2 hours
One of Geology 1, p. 137	1 "
Religious Knowledge 2a, <i>or</i> 2b, <i>or</i> 2c, <i>or</i> 2d, p. 142	1 "
*Physics 3b, 4, 5, 6, pp. 122, 123	7 "
*Biology 5 Pt. I, 40, pp. 127, 131	5 "
*Anatomy 1, 2, p. 132	8 "
*Chemistry 3a, 15, 24, pp. 135, 136	6 "

**Third Year.**

One of Religious Knowledge 3a, <i>or</i> 3b, <i>or</i> 3c, <i>or</i> 3d, <i>or</i> 3e, p. 142	2 hours
World History 1, p. 142	2 "
*Biology 14, 41, 42, pp. 128, 131	4 "
*Anatomy 3, p. 132	12 "
*Biochemistry 1, 4, p. 132	6 "
*Physiology 1, 5, p. 133	6 "

\*Honours.

**Fourth Year.**

One of Religious Knowledge 4a, <i>or</i> 4b, <i>or</i> 4c, <i>or</i> 4d, <i>or</i> 4e, p. 142	2 hours
World History 2, p. 142	2 "
*Physics 13, part, p. 123	$\frac{1}{2}$ "
*Chemistry 2, p. 135	$\frac{1}{2}$ "
*Anatomy 4, p. 132	2 "
*Biochemistry 3, 6, pp. 132-133	9 "
*Physiology 2, 3, 7, p. 133	11 "

**Division II.**

**Second Year.**

English 2a, 2b, p. 93	2 hours
One of Geology 1, p. 137	1 "
Religious Knowledge 2a, <i>or</i> 2b, <i>or</i> 2c, <i>or</i> 2d, p. 142	1 "
*Physics 3b, 4, 5, 6, pp. 122-123	7 "
*Biology 5, Part, 1, 40, pp. 127, 131	8 "
*Chemistry 2, 3a, 15, 24, pp. 135, 136	7 "
*Biochemistry 10, p. 133	2 "

**CHEMISTRY AND MINERALOGY.**

**Entrance Conditions.**

A student who proposes to enter the Special Course in Chemistry and Mineralogy is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation, and to select French as one of the three subjects in which Honour standing is required for entrance upon this course.

**First Year.**

English 1a, pp. 92, 93	2 hours
Latin 1a, p. 85	4 "
German 1a, p. 96	4 "
Mathematics 1, 4, pp. 118-119	2 "
One of Mathematics 6, p. 119	1 "
Religious Knowledge 1a, <i>or</i> 1b, <i>or</i> 1c, p. 141	1 "
*Mechanics 1, p. 121	1 "
*Physics 1, 2, p. 122	5 "
*Biology 1a, 3, 4, p. 127	6 "
*Chemistry 1, 13, p. 135	6 "

*\*Honours.*



**Second Year.**

English 2a, 2b, p. 93	2	"
Scientific German	1	"
One of Geology 1, p. 137	1	"
Religious Knowledge 2a, <i>or</i> 2b, <i>or</i> 2c, <i>or</i> 2d, p. 142	1	"
*Mathematics 12, p. 119	2	"
*Physics 3a, 4, 5, pp. 122, 123		
*Chemistry 3a, 7, 9, 16, pp. 135, 136		
*Geology and Palaeontology 3, 4, p. 137	3	"
*Mineralogy and Petrography 1, 3, 4, p. 138	5	"

**Division I.****Third Year.**

Scientific German.

Scientific French.

One of Religious Knowledge 3a, <i>or</i> 3b, <i>or</i> 3c, <i>or</i> 3d, <i>or</i> 3e, p. 142	2	hours
World History 1, p. 142	2	"

\*Mathematics 21, p. 120

\*Physics 6, p. 123

\*Chemistry 4, 8, 10, 12, 19, 20, 25, pp. 135, 136

\*Mineralogy and Petrography, 6 *or* 8, pp. 138, 139**Fourth Year.**

Scientific German.

Scientific French.

One of Religious Knowledge 4a, <i>or</i> 4b, <i>or</i> 4c, <i>or</i> 4d, <i>or</i> 4e, p. 142	2	hours
World History 2, p. 142	2	"

\*Physics 16, p. 123

One of \*Biology 7, 8, 12, 18, pp. 127, 129

\*A defined part of Chemistry 21 *or* 22 *or* 23\*Chemistry 5, 6, 11, 21 *or* 22 *or* 23, pp. 135, 136**Division II.****Third Year.**

One of English 3a, p. 93	3	hours
Religious Knowledge 3a, <i>or</i> 3b, <i>or</i> 3c, <i>or</i> 3d, <i>or</i> 3e, p. 142	2	"
World History 1, p. 142	2	"

Scientific German.

Scientific French.

\*Physics 6, p. 123

\*Chemistry 8, p. 135

\*Geology and Palaeontology 5, 6, 7, 8, p. 137

\*Mineralogy and Petrography 5, 6, 7, 8, 11, pp. 138, 139

\*Honours.

**Fourth Year.**

One of English 4a, pp. 93, 94	3	hours
Religious Knowledge 4a, or 4b, or 4c, or 4d, or 4e, p. 142	2	"
World History 2, p. 142	2	"

Scientific German.

Scientific French.

One of \*Biology 7, 8, 12, 18, pp. 127, 129

\*Geology and Palaeontology 11, 17, pp. 137, 138

\*Geology and Palaeontology 9, 10, 12, 15, 16, pp. 137, 138

\*Mineralogy and Petrography 9, 10, 12, 13, 14, p. 139

Owing to the revision of the Special Courses, which is as yet incomplete, the conditions defining the academic qualifications for Specialists' certificates in Science (Chemistry and Mineralogy) for students entering the First Year in October, 1914, cannot be definitely announced until after the opening of the Session 1914-1915.

The academic qualifications for Specialists' certificates for students who have completed the First Year in Science (Chemistry and Mineralogy) are those defined in the Arts Calendar for 1913-1914, viz., in addition to the Special, or Honour, work a candidate is required to obtain a minimum of 40% in Latin 1a, English 1a, German 1a, French 1a (Texts only), Mathematics 1, 4, 6, of the First Year; English 2a, 2b, Scientific German and Geology 1, of the Second Year; Scientific German and French and History 3a, of the Third Year; Scientific German and French and History 4a, of the Fourth Year; with a minimum of 50% in Biology 7, 8, 12, 18, as the alternative for Chemistry 21 or 22 or 23, or Geology and Palaeontology 11, 17.

A candidate is required to obtain an average in the Department of at least 50% in the First, Second, and Third Years, and at least 66% in the Fourth Year.

**GEOLOGY AND MINERALOGY.**

**Entrance Conditions.**

A student who proposes to enter the Special Course in Geology and Mineralogy is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation, and to select French as one of the three subjects in which Honour standing is required for entrance upon this Course.

*\*Honours.*

**First Year.**

English 1a, pp. 92, 93	2 hours
Latin 1a, p. 85	4 "
German 1a, p. 96	4 "
Mathematics 1, 4, pp. 118, 119	2 "
One of Mathematics 6, p. 119	1 "
Religious Knowledge 1a, or 1b, or 1c, p. 141	1 "
*Mechanics 1, p. 121	1 "
*Physics 1, 2, p. 122	5 "
*Biology 1a, 3, 4, p. 127	6 "
*Chemistry 1, 13, p. 135	6 "

**Second Year.**

English 2a, 2b, p. 93	2 hours
One of Geology 1, p. 137	1 "
Religious Knowledge 2a, or 2b, or 2c, or 2d, p. 142	1 "
*Physics 3b, 4, 5, 6, pp. 122, 123	7 "
*Biology 7, 8, 29, pp. 127, 128, 130	7 "
*Chemistry 3a, 7, 15, 24, pp. 135, 136	6 "
*Geology and Palaeontology 3, 4, p. 137	3 "
*Mineralogy and Petrography 1, 2, p. 138	2 "

**Third Year.**

One of English 3a, p. 93	3 hours
Religious Knowledge 3a, or 3b, or 3c, or 3d, or 3e, p. 142	2 "
World History 1, p. 142	2 "
Scientific German and French	
*Biology 12, 18, pp. 128, 129	
*Chemistry 17, p. 136	
*Geology and Palaeontology 5, 6, 7, 8, p. 137	
*Mineralogy and Petrography 3, 4, 6, 8, 11, pp. 138, 139	

**Fourth Year.**

One of English 4a, pp. 93, 94	3 hours
Religious Knowledge 4a, or 4b, or 4c, or 4d, or 4e, p. 142	2 "
World History 2, p. 142	2 "
Scientific German and French	
One of Biology 23, 24, p. 129	
*Geology and Palaeontology 11, p. 137	and
*Mineralogy and Petrography 14, p. 139	
*Geology and Palaeontology 9, 10, 12, 13, 14, 15, 16, 17, pp. 137, 138	
*Mineralogy and Petrography 5, 7, 9, 12, 13, pp. 138, 139	

\*Honours.

Owing to the revision of the Special Courses, which is as yet incomplete, the conditions defining the academic qualifications for Specialists' certificates in Science (Mineralogy and Geology) for students entering the First Year in October, 1914, cannot be definitely announced until after the opening of the Session 1914-1915.

The academic qualifications for Specialists' certificates for students who have completed the First Year in Science (Mineralogy and Geology) are those defined in the Arts Calendar for 1913-1914, viz., in addition to the Special, or Honour, work a candidate is required to obtain a minimum of 40% in Latin 1a, English 1a, German 1a, French 1a (Texts only); Mathematics 1, 4, 6, of the First Year; English 2a, 2b, German 2a, French 2a (Texts only), and Geology 1, of the Second Year; English 3a, Scientific German and French, and History 3a, of the Third Year; English 4a, or Political Economy 1a, 1b, 3, Scientific German and French, and History 4a, of the Fourth Year.

A candidate is required to obtain an average in the Department of at least 50% in the First, Second, and Third Years, and at least 66% in the Fourth Year.

## HOUSEHOLD SCIENCE.

### Entrance Conditions.

A student who proposes to enter the Special Course in Household Science is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation.

### First Year.

English 1a, pp. 92, 93	2 hours
Latin 1a, p. 85	4 "
German 1a, p. 96	4 "
Mathematics 1, 4, pp. 118, 119	2 "
One of Mathematics 6, p. 119	1 "
Religious Knowledge 1a, or 1b, or 1c, p. 141	1 "
*Mechanics 1, p. 121	1 "
*Physics 1, 2, p. 122	5 "
*Biology 1a, 3, 4, p. 127	6 "
*Chemistry 1, 13, p. 135	6 "

\*Honours.



**Second Year.**

English 2a, 2b, p. 93	2 hours
German 2a, p. 96	4 "
One of History 2a, p. 103	1 "
Geology 1, p. 137	1 "
Religious Knowledge 2a, <i>or</i> 2b, <i>or</i> 2c, <i>or</i> 2d, p. 142	1 "
*Biology 9, 10, 16a, p. 128	4 "
*Biochemistry 10, p. 133	2 "
*Chemistry 3a, 15, p. 135	7 "
*Household Science 2, p. 139	6 "

**Third Year.**

English 3a, p. 92	3 hours
One of History 3a, p. 103	3 "
Political Economy 1b, 16, pp. 106, 108	3 "
Philosophy 14, p. 115	3 "
Religious Knowledge 3a, <i>or</i> 3b, <i>or</i> 3c, <i>or</i> 3d, <i>or</i> 3e, p. 142	2 "
*Biochemistry 1, 4, p. 132	6 "
*Physiology 1, 6, p. 133	5 "
*Household Science 3, p. 139	10 "
*Hygiene and Sanitation	1 "

**Fourth Year.**

English 4a, pp. 92, 93	3 hours
One of History 4a, p. 103	3 "
Political Economy 1b, 31, pp. 106, 111	3 "
Religious Knowledge 4a, <i>or</i> 4b, <i>or</i> 4c, <i>or</i> 4d, <i>or</i> 4e, p. 142	2 "
*Biochemistry 8, p. 133	10 "
*Household Science 5, 6, 7, p. 140	10 "

Owing to the revision of the Special Courses, which is as yet incomplete, the conditions defining the academic qualifications for Specialists' certificates in Household Science for students entering the First Year in October, 1914, cannot be announced until after the opening of the Session 1914-1915.

The academic qualifications for Specialists' certificates for students who have completed the First Year in Household Science are those defined in the Arts Calendar for 1913-1914, viz., in addition to the Special, or Honour, work a candidate is required to obtain a minimum of 40% in Latin 1a, Greek and Roman History 1, English 1a, German 1a, French 1a, and Mathematics 1, 4, of the First Year; English 2a, 2b, German 2a, French 2a, and History 2a, or Geology 1, of the Second Year; English 3a, and two of German 3a, French 3a, History 3a, Philosophy 14, of the Third Year; English 4a, and two of German 4a, French 4a, History 4a, and Political Economy 1b, 31, of the Fourth Year.

A candidate is required to obtain an average in the Department of at least 50% in the First, Second, and Third Years, and at least 66% in the Fourth Year.

*\*Honours.*

# PHYSIOLOGY AND HOUSEHOLD SCIENCE.

## Entrance Conditions.

A student who proposes to enter the Special Course in Physiology and Household Science is required to obtain at Matriculation or at an equivalent examination Honour standing in any three of: Greek, Latin, English, German, French, Algebra and Geometry, Trigonometry, Physics, Biology, Chemistry, of which not more than one may be a Science. Candidates are recommended to take German and Experimental Science at Junior Matriculation.

## Third Year.

English 3a, p. 93	2	hours
One of History 3a, 3d, p. 103	2	"
Religious Knowledge 3a, or 3b, or 3c, or 3d, or 3e, p. 142	2	"
World History 1, p. 142	2	"
*Biology 14, 41, 42, pp. 128, 131	4	"
*Biochemistry 1, 4, p. 132	6	"
*Physiology 1, 5, p. 133	6	"
*Household Science 2, 4, pp. 139, 140	10	"

## Fourth Year.

English 4a, pp. 92, 93	2	hours
One of History 4a, 4c, p. 103	2	"
Religious Knowledge 4a, or 4b, or 4c, or 4d, or 4e, p. 142	2	"
World History 2, p. 142	2	"
*Biochemistry 2, 6, 7, pp. 132, 133	12	"
*Physiology 3, 7, p. 133	5	"
*Household Science 5, 6, 8, p. 140	8	"

Owing to the revision of the Special Courses, which is as yet incomplete, the conditions defining the academic qualifications for Specialists' certificates in Household Science (Physiology and Household Science) for students entering the First Year in October, 1914, cannot be definitely announced until after the opening of the Session 1914-1915.

The academic qualifications for Specialists' certificates for students who have completed the First Year in Household Science (Physiology and Household Science) are those defined in the Arts Calendar for 1913-1914, viz., in addition to the Special, or Honour, work a candidate is required to obtain a minimum of 40% in Latin 1a, Greek and Roman History 1, English 1a, German 1a, French 1a, and Mathematics 1, 4, of the First Year; English 2a, 2b, Geology 1, and two of German 2a, French 2a, History 2a, of the Second Year; English 3a, and History 3a, of the Third Year; English 4a, and History 4a, of the Fourth Year.

A candidate is required to obtain an average in the Department of at least 50% in the First, Second, and Third Years, and at least 66% in the Fourth Year.

*\*Honours.*

**ARTS AND FORESTRY.****Six Year Course.**

The following schedule shows the subjects and amount of time to be devoted to each. In order to meet the exigencies of the time-table their location in each year may be varied, with the concurrence of the Faculties concerned.

**First Year.**

Latin 1a, p. 85	4 hours
English 1a, pp. 92, 93	2 "
German	4 "
French 1a, p. 98	4 "
Mathematics 1, 4, 6, <i>or</i> 3, 5, 7, pp. 118, 119	3 "
Mechanics 1, p. 121 and	1 "
Physics 1, 2, <i>or</i> 9, 10, pp. 122, 123	4 "
Biology 1, p. 127	2 "
One of Greek and Roman History 1, p. 87	1 "
Religious Knowledge 1a, <i>or</i> 1b, <i>or</i> 1c, p. 141	1 "
Forestry 1 (synopsis)	1 "

**Second Year.**

English 2a, 2b, p. 93	2 hours
German	4 "
French 2a, p. 99	4 "
History 2a, p. 103	1 "
Biology 3, 4, 18, pp. 127, 129	7 "
Chemistry 1, 14, p. 135	4 "
One of Latin 2a, pp. 85, 86	4 "
Physics 3, pp. 122, 123	1½ "
One of Religious Knowledge 2a, <i>or</i> 2b, <i>or</i> 2c, <i>or</i> 2d, p. 142	1 "
Geology 1, p. 137	1 "
Forestry 2a	4 "

**Third Year.**

English 3a, p. 93	3 hours
German	2 "
French 3a, p. 99	2 "
Biology 8, 17, pp. 127, 129	7 "
Chemistry 3b, p. 135	1 "
Geology and Mineralogy, see Forestry Calendar	3½ "
One of Religious Knowledge 3a, <i>or</i> 3b, <i>or</i> 3c, <i>or</i> 3d, <i>or</i> 3e, p. 142	2 "
World History 1, p. 142	2 "
Surveying and Map Drawing	7 "
Forestry 2b, 9	3 "

Fourth Year.

History 4a, p. 103	2	hours
Geology 10, p. 137	1	"
One of Philosophy 9, p. 114	2	"
Physics 4, 5, p. 123	2	"
Chemistry 4, or 7, p. 135	2	"
One of Religious Knowledge 4a, or 4b, or 4c, or 4d, or 4e, p. 142	2	"
World History 2, p. 142	2	"
Surveying (Topographic)	7	"
Forestry 6, 8	9	"
Extra field work	4	weeks

Fifth Year.

English 4a, pp. 92, 93	2	hours
Political Economy 1b, 3, p. 106	2	"
Constitutional Law 2, pp. 111, 112	2	"
Philosophy 26, p. 116	3	"
Science	3	"
Biology 47, p. 131	2	"
Forestry 3, 4, 5, 7, 11	6	"
Extra field work	4	weeks

Sixth Year.

Mathematics 12, p. 119	2	hours
Political Economy 33, p. 111	1	"
Chemistry 12, p. 135	1	"
One of Philosophy	3	"
Science	3	"
Engineering	4	"
Forestry 10, 12, 13, 14, 15, 16	9	"

Summary.

Latin	4 (+4)	hours
English	9	"
German	10	"
French	10	"
Mathematics	5	"
History	7	"



**Summary—Con.**

Political Economy	7	hours
Law	1	"
Philosophy	3 (+4)	"
Physics	4 (+3)	"
Biology	19	"
Chemistry	11	"
Geology	11	"
Religious Knowledge	6	"
Surveying	10	"
Engineering	4	"
Science	3 (+7)	"
Forestry	31	"

Hours in parenthesis are options exchangeable with other Departments.

## POST-GRADUATE COURSE.

### ADMISSION AD EUNDEM GRADUM.

A graduate in the Faculty of Arts of another University, if his degree be not an honorary one, may be admitted *ad eundem gradum* in this University on such conditions as the Senate may determine.

### DEGREE OF MASTER OF ARTS.

A candidate for the degree of Master of Arts must be a Bachelor of Arts in this University and must also be of one year's standing as such before presenting himself for the higher degree.

The candidate may register at any time for the Master's degree, but registration must be made on or before October 15th in order that the candidate may be eligible for the examinations for the Master's degree in the following May.

A candidate who registers after October 15th cannot be admitted to the degree of Master of Arts earlier than October 1st following, and at least eight months must elapse between the approval of the subject of study and the admission to the degree.

The candidate may, according to the standing which he obtained at the examinations for the Bachelor's degree, proceed to the Master's degree by (1) following a prescribed course of study, or (2) presenting a thesis on some selected subject and undergoing an examination on the same.

- (1) (a) A graduate of an Honour Course on obtaining Honours in the Fourth Year in another Honour Course may be granted the degree of Master of Arts.
- (b) A graduate who obtained standing in General Proficiency in the Fourth Year on obtaining Honours of the Fourth Year in an Honour Course may be granted the degree of Master of Arts.
- (c) A candidate who has pursued for *at least* one academic year a course of advanced study in one Department, or in more than one Department, may, on passing an examination on the course of study selected, be admitted to the degree of Master of Arts. The course of study selected must be arranged on a definite plan and must, with the report of the professors and heads of the Department or Departments concerned, be submitted for the approval of the Senate on or before the first day of November. When the course of study involves more than one Department the work must be carried on under the supervision of one of these Departments.

- (2) A candidate on presenting a thesis containing the results of some special study or investigation, and adjudged to be of sufficient merit may be granted the degree of Master of Arts.

The subject selected, with the report thereon of the professors and heads of the Honour Department or Departments in which the subject lies, must be submitted for approval of the Senate on or before the first day of November.

The thesis shall be accepted only on the approval of at least two of the professors of the Honour Department or Departments concerned.

The candidates shall be required to pass an examination, written or oral, on the subject of the thesis, conducted by the professors and heads of the Department or Departments concerned. This examination shall not be held earlier than seven months after the date of registration and the copy of the thesis submitted which must be printed or typewritten must be presented at least four weeks before the examination takes place.

In the case of a candidate qualifying to receive the degree at the Annual Convocation in June of any year the copy of the thesis, which must be printed or typewritten, must be presented on or before the first day of the preceding April.

- (3) A candidate may on the report to that effect of the examiners, or, in the case of a thesis, of the professors and heads of the Department or Departments concerned, be granted the degree of Master of Arts with Honours, but no candidate shall be recommended for Honours who in the course for this degree obtains less than First-Class Honour standing.

- (4) A candidate who is a graduate in Arts of this University and has fulfilled all the requirements for the Degree of Doctor of Philosophy in this University may, on the payment of the fee for the degree of Master of Arts, be admitted to that degree without further examination.

### DEGREE OF DOCTOR OF PHILOSOPHY.

The degree of Doctor of Philosophy is conferred on those who, after a period of residence at and training in this University, have given evidence of high attainment in some special field of learning, manifested not only by examinations, but also by the completion of an original investigation of some subject the results of which constitute a distinct advance in that field of learning. The degree is therefore specially intended to indicate the attainment of the capacity for research.

The conditions on which the degree is conferred are as follows:—

1. The candidate must be (a) a graduate in Arts of this University, or (b) a graduate in Arts of another University, who has been accepted by the Board of Post Graduate Studies subject to the approval of the Senate as possessing the necessary qualifications for entering on the course of study for the degree. Graduates in other faculties of this or other Universities may also be accepted on such conditions as the Board of Post Graduate Studies may determine.

2. The candidate shall register in the University as a student in course for the degree and shall, after registration, have pursued in this University for *three academic years* the study of a special subject, termed the major subject, and of two other subjects, termed minor subjects, under the direction of the professors of the Departments including those subjects. Registration may take place at any time during the year. No candidate shall, however, be registered except on the recommendation of the professor or professors of the Department in which his major subject *lies*.

3. The final determination of the minor subjects shall be by the Board of Post Graduate Studies on the report of the professors in the Department which includes the major subject, but only one minor shall be selected from the Group which includes the major subject, and the second, selected from another Group, shall be cognate with the major subject.

4. Exemption from attendance for one year of the course of study required may be granted by the Board of Post Graduate Studies on the report of the professors of the Departments concerned, but the candidate must present satisfactory evidence of study in his major subject as a graduate student during that year at an approved University.

5. The candidate must present evidence of ability to read ordinary French and German with facility.

6. The time necessary for instruction in the two minor subjects combined should not exceed two-thirds of that required for the major subject.

7. The candidate shall present either during his course of study or at the completion of it, a thesis embodying the results of an original investigation conducted by himself on some selected topic.

8. The acceptance of the thesis shall be determined on the report of the professors of the Department which includes the major subject, but no thesis shall be accepted as satisfactory which is not a distinct contribution to the knowledge of the subject.

9. After the acceptance of the thesis and at a time and in a manner to be determined by the Board of Post Graduate Studies the candidate shall undergo written and oral examinations on his major subject and on his two minor subjects conducted by the professors of the Departments in which the major and minor subjects are included and by such other instructors in the University as the Board of Post Graduate Studies may appoint to that end. No candidate shall be reported as satisfactory who does not show competent knowledge of the subjects, but the examiners may dispense with written examinations on one or both minor subjects, provided they are satisfied from the candidate's record that he has a competent knowledge of such subject or subjects. Such dispensation from examination must be reported to the Board of Post Graduate Studies.

10. In the final oral examination, the Chairman of the Board of Post Graduate Studies shall preside and direct the conduct of the examination.

11. The candidate shall furnish to the Registrar one hundred and fifty printed copies of the thesis after its acceptance, and in each copy shall be included the report of the professors who shall certify over their names that in their opinion "the thesis is a distinct contribution to the knowledge of the subject" and "that they recommend that it be accepted as fulfilling part of the requirements for the degree of Doctor of Philosophy in this University."

12. On the report of the Board of Post Graduate Studies that all the requirements have been complied with, the Senate may, either at the Annual Convocation or at any regular session, confer on the candidate the degree of Doctor of Philosophy.

13. The following is the list of major subjects arranged in groups:—

**GROUP I. BIOLOGY.**

1. General Biology.
2. Zoology including Animal Morphology.
3. Anatomy.
4. Botany.

**GROUP II. PHYSIOLOGY AND BIOCHEMISTRY.**

1. Physiology.
2. Physiological Chemistry.
3. Biochemistry.



GROUP III. PATHOLOGICAL SCIENCES.

1. Pathology.
2. Pathological Chemistry.
3. Bacteriology.

GROUP IV. GEOLOGY AND MINERALOGY.

1. Geology.
2. Palæontology.
3. Mineralogy.
4. Petrography.

GROUP V. CHEMISTRY.

1. Inorganic Chemistry.
2. Organic Chemistry.
3. Physical Chemistry.

GROUP VI. PHYSICS.

1. Light.
2. Heat.
3. Electricity and Magnetism.
4. Sound.
5. Dynamics.

GROUP VII. MATHEMATICS.

1. Algebra and Theory of Numbers.
2. Philosophy of Numbers and Fundamental Concepts.
3. Geometry.
4. Analysis.

GROUP VIII. PHILOSOPHY.

1. Logic and Metaphysics.
2. Psychology.
3. History of Philosophy.
4. Ethics.

GROUP IX. POLITICAL SCIENCE.

1. Economic History.
2. Economic Theory.
3. Public Finance.
4. Philosophy of Politics.
5. Constitutional History and Law.

GROUP X. ORIENTAL LANGUAGES, LITERATURE AND HISTORY.

1. Hebrew Language, Literature and History.
2. Aramaic Language, Literature and History.
3. Arabic Language, Literature and History.
4. Assyrian and Babylonian Literature and History.

GROUP XI. ROMANCE LANGUAGES AND LITERATURE.

1. Italian Language and Literature.
2. Spanish Language and Literature.





UNIVERSITY COLLEGE.

**UNIVERSITY COLLEGE.**

University College is, since the Federation Act of 1887, the complement, in the system of higher education provided by the State, of the University of Toronto. The State furnishes through University College instruction in those departments of the Arts course in which it does not furnish instruction through the University. These departments are Greek, Latin, Ancient History, English, French, German, Oriental Languages and Ethics.

*Principal* ..... MAURICE HUTTON, M.A., LL.D.  
*Registrar* ..... J. S. WILL, B.A.  
*Superintendent of Women Students* ..... MISS SALTER

**University College Council.****THE PRINCIPAL.**

PROFESSOR McCURDY.	ASSOCIATE PROFESSOR CARRUTHERS.
PROFESSOR ALEXANDER.	ASSOCIATE PROFESSOR NEEDLER.
PROFESSOR HUME.	ASSOCIATE PROFESSOR JOHNSTON.
PROFESSOR SQUAIR.	ASSOCIATE PROFESSOR WALLACE.
PROFESSOR VAN DER SMISSEN.	ASSOCIATE PROFESSOR DE CHAMP.
PROFESSOR FLETCHER.	ASSOCIATE PROFESSOR WILL.
PROFESSOR MILNER.	ASSOCIATE PROFESSOR MUELLER.
ASSOCIATE PROFESSOR KEYS.	ASSISTANT PROFESSOR TOEWS.
ASSOCIATE PROFESSOR CAMERON.	ASSISTANT PROFESSOR G. OSWALD SMITH.

**Enrolment of Students.**

All students of the University proceeding to a degree in Arts are required to enroll themselves in University College or in Victoria College or in Trinity College or in St. Michael's College.

The conditions precedent to enrolment in University College are determined by the Council of the College. Every student of the College must either be an undergraduate of the University, or, if he be an occasional student, must satisfy the College Council that he has a sufficient knowledge of the subject in which he proposes to attend College lectures to do so with advantage.

**Discipline.**

The College has full control of its students so far as concerns their attendance upon lectures in the courses provided by the College, and their admission to the University examinations. No student of the College will be received by the University for examination without a certificate from the College that he has complied with its regulations.

### **Religious Knowledge.**

No student will be allowed to take a Religious Knowledge option in any other than University College without the consent of the College Council. Each student who wishes to take a course in Religious Knowledge outside University College must make formal application on or before October 25th, stating what course he desires to take, for what subject the course is an option, in which College the applicant proposes to take this course and for what reason he wishes to take it outside University College.

### **Student Societies.**

Various societies and associations, both of young men and of young women, have been organized for the promotion of Christian effort, social intercourse, literary and scientific activity. The Young Men's Christian Association has a building specially devoted to its purposes, in which a devotional meeting is held every Thursday, and a public meeting every Sunday, at which latter addresses are delivered by prominent Christian workers. There is also a Young Women's Christian Association, which meets weekly. The Literary and Scientific Society, whose membership is made up of male students, holds weekly meetings for discussion, the reading of essays, etc. The Women's Literary Society has similar aims and methods. Besides the above, there are several associations for the encouragement of special branches of study. These are the Classical Association, the Modern Language Club, the Oriental Association, etc. A paper devoted to literature and College news is published thrice weekly, its staff consisting of representatives from various sections of the undergraduate body. For lists of officers of the various societies, see Appendix.

### **Lodging and Board.**

Lodging and board are readily obtainable in numerous private boarding-houses within convenient distance of the University at a cost of from four dollars upwards for comfortable lodging with board; or rooms may be rented at a cost of from one dollar per week upwards, and board obtained separately at moderate rates. A list of accredited boarding-houses is kept by the Secretary of the University College Young Men's Christian Association, and students are recommended to consult him with reference to the selection of suitable accommodation. Board may also be obtained at moderate rates in the University dining hall.



**Residence for Women Students.**

Queen's Hall, No. 7 Queen's Park, the residence of the late W. H. Howland, was opened in January, 1905, for the reception of women students. Additional accommodation was afforded by the opening of No. 9 Queen's Park in 1911. No. 4 was added in 1913. There is accommodation in all for 90 persons. Rates range from \$5.50 to \$6.00 according to rooms. Applications for admission should be made to the Superintendent of Queen's Hall.

*Superintendent:* MRS. CAMPBELL.

**Extracts from the Rules of Queen's Hall.**

Students may receive their friends on Friday afternoon and evening.

All visitors must leave the Residence by 10 p.m.

When going out for dinner, or after dinner, students must leave their addresses with the Superintendent and must report to her on returning. Except by special permission no student may be out later than 10.30 p.m., which permission must be obtained before dinner. In the case of students of the First and Second Years, who are in Residence for the *first time*, this absence must not occur oftener than once a week unless under exceptional circumstances.

No student in Residence may remain out later than 12.30 a.m.

Students having late leave must enter in the Register the hour at which they return. Entries after 12.30 must be countersigned by the Superintendent.

Students may not remain out over night except under special circumstances, when permission must be obtained from the Superintendent before leaving the Residence.

No student of the Fourth Year is entitled, except provisionally, to reserve a room before September 1st.

A quiet hour must be kept from 8 to 10 p.m., except on Saturday.

The hall lights are turned out at 10.30 p.m., after which hour there must be silence.

Payment for board must be made in advance.

**Regulations Relating to Students, Terms and Examinations.**

1. Students entering University College are required to produce satisfactory certificates of moral character and previous good conduct.

2. No student will be enrolled in any year, or be allowed to continue in attendance, whose presence for any cause is deemed by the Council to be prejudicial to the interests of the College.

3. Matriculated students are required to attend the courses of instruction and examinations in all subjects prescribed for students of their respective standing, and no student will be permitted to remain in the College who persistently neglects academic work.

4. The certificate required for admission to the University examinations will not be granted to students who have been reported to the Council for not conforming to the College regulations, or for improper conduct of any kind.

5. Matriculated students are required to reside, during the period of their attendance on lectures, in houses selected by their parents or guardians or approved by the College Council.

6. Men and women students, unless members of the same family, are not permitted to reside in the same lodging-houses.

7. Women students are under the supervision of the Lady Superintendent, whose directions as to conduct are to be observed.

8. All interference on the part of any student with the personal liberty of another, by arresting him, or summoning him to appear before any unauthorized tribunal of students, or otherwise subjecting him to any indignity or personal violence, is forbidden by the Council. Any student convicted of participation in such proceedings will forfeit the certificate required for admission to the University examinations, and will render himself liable to expulsion from the College.

9. A student who is under suspension, or who has been expelled from the College or University, will not be admitted to the University buildings or grounds.

10. The constitution of every College society or association of students and all amendments to any such constitution, must be submitted for approval to the College Council. All programmes of such societies or associations must, before publication, receive the sanction of the Council. Permission to invite any person not a member of the Faculty of University College to preside at or address a meeting of any society or association must be similarly obtained. Societies and associations are required to confine themselves to the objects laid down in their constitution.

11. The name of the College is not to be used in connection with a publication of any kind without the permission of the College Council.

12. Certificates of attendance on lectures in any department during an academic year may be given to occasional students who have been regular in their attendance, and who have also passed the examinations in such department.

13. All undergraduates are expected to wear the prescribed academic costume within the class-rooms and buildings.

14. All class receptions of the various years can be held on Saturday afternoons only.

# WINNERS OF PRIZES, MEDALS AND SCHOLARSHIPS IN THE COLLEGE IN 1913.

## Prizes.

French Prose Prize.....	Miss D. E. Redman
The Toronto Alumnae Prize in English Composition of the Second Year.....	E. A. C. MacMillan

## Medals.

Governor-General's Medal in Modern Languages (Fourth Year).....	Miss M. E. Ross
McCaul Medal in Classics.....	H. V. Wrong

## Scholarships.

The First William Dale, for Classics (Junior Matriculation)...	J. Leonard
The Second William Dale, for Classics (Junior Matriculation)	Miss E. A. Sinclair
The McCaul, for Classics (Junior Matriculation).....	Miss E. I. Fowler
The Moss, for Classics (First Year).....	S. D. Gardiner
The Edward Blake, for Moderns (First Year) ...	{ Miss E. M. Gaiser } Aeq. { Miss M. S. Hall }
The William Mulock, for Classics (Second Year).....	H. R. Kemp
The George Brown, for Moderns (Second Year).....	Miss M. Anderson
The Knox College, for Orientals (Second Year).....	No award
The John Macdonald, for Philosophy (Third Year).....	C. A. Gowans
The Julius Rossin, for Moderns (Third Year) ..	{ Miss K. I. Collins } Aeq. { Miss J. B. Tom }
The Moss, for Classics (Third Year).....	D. Breslove
The Knox College, for Orientals (Third Year).....	No award



**VICTORIA COLLEGE.**

**VICTORIA COLLEGE.**

Victoria College was founded by resolution of the Conference of the Methodist Church in Canada, held in Kingston in August, 1830. The institution was opened for students at Cobourg on the 18th of June, 1836, with the Rev. Matthew Richey, M.A., as Principal. On the 12th of October, 1836, letters patent were issued by His Majesty King William IV, incorporating the institution as a seminary of learning for the Province of Upper Canada, under the name of "Upper Canada Academy".

In 1841 the Parliament of the United Provinces of Upper and Lower Canada, being now first constituted by Acts of the Imperial Parliament with power to grant such a charter, at its first session held in the city of Kingston, passed an Act extending the charter of the Academy under the name and style of "Victoria College, with power and authority to confer degrees of Bachelor, Master and Doctor of the various Arts and Faculties", which Act was assented to by the Governor-General on the 27th of August, 1841.

On the 21st of October, 1841, the Rev. Egerton Ryerson, having been appointed principal, opened the first college session under the enlarged charter.

In the year 1844 the Rev. A. McNabb, D.D., succeeded the Rev. Dr. Ryerson as Principal, and occupied the office until 1849. At the close of his term the number of students in the College was 140.

In 1850 the Rev. S. S. Nelles, M.A., was appointed Principal, and addressed himself to the task of organizing and enlarging the College to the status and work of a University. In the year 1854-55 the Faculty of Medicine was added and established in Toronto. In 1860 the Faculty of Law was added, and in 1871 the Faculty of Theology.

In the year 1883-84 a Commission, appointed by the General Conference of the Methodist Church, arranged for the consolidation of Albert College, Belleville, with Victoria College, Cobourg, and legal effect was given to this consolidation by Act of the Legislature of Ontario, 47 Vict., chap. 93.

The corporate name was by this Act changed to "Victoria University". The government of the University was vested in a Board of Regents, Chancellor, Vice-Chancellor and Senate. To these bodies was given power to affiliate outlying colleges, and full university powers in all faculties were continued. The Rev. S. S. Nelles, D.D., LL.D., as President, was *ex-officio* first Chancellor, and William Kerr, M.A., LL.D., K.C., Senator, was elected first Vice-Chancellor.



Under the provisions of the present charter the following colleges are affiliated in Arts with Victoria University:—Albert College, Belleville; the Ontario Ladies' College, Whitby; Alma College, St. Thomas; Columbian Methodist College, New Westminster, B.C.

In 1887 the Rev. S. S. Nelles, D.D., LL.D., died, and the Rev. N. Burwash, S.T.D., LL.D., was appointed President and Chancellor.

On the 12th of November, 1890, under the provisions of the Revised Statutes of Ontario, chap. 230, and the Acts amending the same, Victoria University was, by proclamation of the Lieutenant-Governor, federated with the University of Toronto.

On the first of October, 1892, the Faculty of Victoria College began work in the present Main Building in Queen's Park, Toronto, and the federation of the Universities was practically consummated. The Faculty of Arts then assumed the work and relation of a College in the University of Toronto, providing instruction in all subjects assigned by the Federation Act to University College. In other subjects the students of Victoria College attend the lectures and laboratory practice of the University of Toronto, and receive their degrees under the statutory regulations of its Senate.

By the provisions of the Federation Act of 1887 the President of Victoria College, a representative of the Senate of Victoria College, and five representatives of the graduates in Arts, are members of the Senate of the University of Toronto, and the graduates and undergraduates of Victoria College are granted the same standing and privileges in the University of Toronto. By the provisions of the University Act of 1906, three members of the Arts Faculty of Victoria, chosen by that body, are sent as additional representatives to the Senate of the University of Toronto, and all the permanent members of the Arts Staff of Victoria as well as one member of the theological staff chosen by that Faculty are members of the Council of the Faculty of Arts of the University of Toronto.

At Federation five hundred and seventy-seven graduates of Victoria College were admitted to standing and privileges of the degree of B.A. in the University of Toronto; two hundred and thirty-one to those of M.A.; nine hundred and sixty-three to those of M.D.; one hundred and twenty-five to those of LL.B.; and forty to those of LL.D.

By the University Act of 1901 the electoral body in Convocation of Victoria College was made permanent, and was enlarged to include all graduates in Arts of the University of Toronto since 1892 who at graduation were enrolled in Victoria College.

The electoral body of Victoria College in the Convocation of the University of Toronto now consists of 1611 graduates in Arts, besides the graduates in Law and Medicine, who form one body with those of the University of Toronto.

In 1913, the Rev. N. Burwash, S.T.D., LL.D., retired from the position of President and Chancellor and the Rev. R. P. Bowles, M.A., D.D., LL.D., was appointed in his stead.

The following Benefactions have been given to Victoria University for the endowment of chairs and erection of buildings:—

Mr. and Mrs. Edward Jackson for endowment of chair, \$30,000.

Wm. Gooderham, Esq., for building and endowment, \$200,000.

The Honourable Geo. A. Cox and Mrs. Cox, for endowment of two chairs, \$100,000.

Hart A. Massey, Esq., for building and endowments, \$960,000.

The Honourable John Macdonald, for building for federation purposes, \$25,000.

W. E. H. Massey, Esq., for endowment, three hundred shares of Massey-Harris stock.

J. W. Flavell, Esq., for endowment, \$30,000.

Andrew Carnegie, Esq., for library building, \$50,000.

Cyrus A. Birge, Esq., for library endowment, \$50,000.

From these and other sources the following Chairs have been endowed:—

The Edward Jackson Chair in Biblical and Systematic Theology.

The Ryerson Chair in Ethics and Evidences of Christianity.

The Nelles Chair in Ancient History.

The William Gooderham Chair in English Literature.

The Eliza Gooderham Chair in French Literature.

The H. A. Massey Chair in the English Bible.

The Eliza Phelps Massey Chair in Old Testament Exegesis.

The Geo. A. Cox Chair in New Testament Exegesis.

The Margaret Cox Chair in Homiletics and Pastoral Theology.

The W. E. H. Massey Chair in Greek Language and Philosophy.

The J. W. Flavell Chair in Hebrew.

A special endowment for the Presidency of the College.

The John Macdonald Chair in Latin.

The buildings, library, furniture and grounds of Victoria College are now valued at \$1,029,685.07; and the endowment is \$774,608.90.

**GOVERNMENT OF VICTORIA COLLEGE.**

**The Board of Regents.**

REV. A. CARMAN, M.A., D.D., *General Superintendent of the Methodist Church.*

REV. S. D. CHOWN, D.D., *General Superintendent of the Methodist Church.*

REV. R. P. BOWLES, M.A., D.D., LL.D., *Chancellor.*

HON. J. J. MACLAREN, M.A., LL.D., *Vice-Chancellor.*

HON. GEORGE A. COX, *Senator, Treasurer.* (Ob.)

HON. B. M. BRITTON, M.A.

REV. E. B. RYCKMAN, M.A., D.D.

REV. JAMES ALLEN, M.A.

REV. W. P. DYER, M.A., B.Sc., D.D.

REV. J. S. ROSS, M.A., D.D.

REV. WILLIAM BRIGGS, D.D.

REV. E. N. BAKER, M.A., D.D.

A. E. AMES, ESQ.

R. A. REEVE, B.A., M.D., LL.D.

C. D. MASSEY, ESQ.

E. R. WOOD, ESQ.

REV. S. CLEAVER, M.A., D.D.

H. H. FUDGER, ESQ.

N. W. ROWELL, ESQ., K.C., M.P.P.

REV. A. J. IRWIN, B.A., D.D.

REV. J. W. GRAHAM, B.A., D.D.

W. L. T. ADDISON, B.A., M.D.

C. A. BIRGE, ESQ.

REV. S. P. ROSE, D.D.

REV. THOMAS MANNING, M.A., D.D.

J. C. EATON, ESQ.

C. V. MASSEY, ESQ., B.A.

REV. A. H. GOING, M.A.

*Representatives of the Alumni:*

H. HOUGH, M.A., LL.D.

HIS HONOUR JUDGE HUYCKE, B.A., LL.B.

C. C. JAMES, M.A., LL.D., F.R.S.C., C.M.G.

C. W. KERR, B.A.

J. R. L. STARR, B.A., LL.B., K.C.

REV. E. A. CHOWN, B.A., B.D.

H. W. AIKINS, B.A., M.D.

**The Senate.**

REV. R. P. BOWLES, M.A., D.D., LL.D., *Chancellor.*

HON. MR. JUSTICE MACLAREN, M.A., LL.D., *Vice-Chancellor.*

REV. A. CARMAN, M.A., D.D., *General Superintendent of the Methodist Church.*

REV. S. D. CHOWN, D.D., *General Superintendent of the Methodist Church.*

REV. N. BURWASH, S.T.D., LL.D., F.R.S.C., *President Emeritus.*

A. P. COLEMAN, M.A., PH.D. (Bresl.) LL.D., F.R.S., *Honorary Professor.*

PROFESSORS OF THE FACULTY OF ARTS.

PROFESSORS OF THE FACULTY OF THEOLOGY.

MEMBERS OF THE BOARD OF REGENTS.

*Representative of Albert College:*

F. W. MERCHANT, B.A., D.PAED.

*Representative of the Ontario Ladies' College:*

REV. J. J. HARE, M.A., PH.D.

*Representative of Alma College:*

REV. R. I. WARNER, M.A., D.D.

*Representatives of the Alumni:*

B. E. MCKENZIE, B.A., M.D.

G. G. MILLS, B.A.

REV. R. N. BURNS, B.A., D.D.

L. A. KENNEDY, M.A.

F. C. COLBECK, B.A.

E. B. RYCKMAN, M.A., LL.B., K.C.

REV. A. B. CHAMBERS, LL.B., D.D.

F. N. G. STARR, M.D., C.M., F.R.C.S.

**ADMINISTRATIVE OFFICIALS.**

<i>President</i> .....	REV. R. P. BOWLES, M.A., D.D., LL.D.
<i>Dean of the Faculty of Arts</i> .....	J. C. ROBERTSON, M.A.
<i>Dean of the Faculty of Theology</i> .....	REV. F. H. WALLACE, M.A., D.D.
<i>Registrar</i> .....	A. L. LANGFORD, M.A.
<i>Librarian</i> .....	A. E. LANG, M.A.
<i>Secretary of the Faculty</i> .....	N. W. DEWITT, B.A., PH.D.
<i>Treasurer</i> .....	HON. G. A. COX (ob.)
<i>Assistant Treasurer</i> .....	W. E. RUNDLE, ESQ.
<i>Dean of Residence</i> .....	C. V. MASSEY, B.A.
<i>Dean of Annesley Hall</i> .....	MISS M. E. T. ADDISON, B.A.

## **GENERAL REGULATIONS AND ANNOUNCEMENTS. FOR STUDENTS IN ARTS.**

### **Admission.**

Students are admitted to registration in the Faculty of Arts on having passed the Matriculation examination prescribed by the University of Toronto, or on giving the Faculty satisfactory evidence of their ability to pursue the course of study proposed. They are required to observe the general regulations of the University of Toronto and of Victoria College in regard to attendance on lectures and examinations.

### **Examinations.**

No student may present himself for any University examination subsequent to matriculation without having complied with all the requirements of his college affecting his admission to such examination.

### **Occasional Students.**

Occasional students may be admitted to lectures on application.

Certificates of attendance on lectures in any department during an academic year may be given to occasional students who have been regular in their attendance and who have passed the examinations in such department.

### **Terms.**

The term will not be allowed to students who have been reported to the President by any Professor as neglecting to attend the required lectures, or who have not conformed to the statutes and regulations of the College.

### **Instruction.**

Instruction in the various subjects of the Arts course is given by the Arts Faculty of the University of Toronto and the Arts Faculty of Victoria College. Instruction in the Religious Knowledge options is given by the Theological Faculty of Victoria College.

### **College Examinations.**

Students are required to attend all examinations prescribed by the Professors and Lecturers in their departments.

Prizes and honours are awarded on the recommendation of the Professors and Lecturers, in accordance with the requirements prescribed by them in their several departments.

### **Fees.**

The fees required to be paid by students enrolled in Victoria College are those prescribed by the Governors of the University of Toronto. Enrolment fees are paid to the Fees Clerk of the College; all other fees are paid to the Bursar of the University of Toronto.



### **Discipline.**

All students enrolled in Victoria College are subject to the regulations as to discipline prescribed by the Council of the Faculty of Arts of the University of Toronto.

Students are required to attend the lectures, as well as the examinations on all subjects necessary for students of their course and standing. Compliance with this rule will be required as a condition of admission to examination by the University unless dispensation has been obtained.

All interference with the personal liberty of the student, by arresting him, or summoning him to appear before any unauthorized tribunal of students, or otherwise subjecting him to any indignity or personal violence is forbidden by the Faculty. Any student convicted of participation in such proceedings will forfeit the certificate required for admission to the University examinations, and will render himself liable to expulsion from the College.

### **Religious Services.**

Morning prayers are held daily in the Chapel, at which all students are expected to be present. Other religious services will be held at suitable times, to which all students are cordially invited.

### **Libraries, Museums, etc.**

The students of Victoria College, besides having the use of the University of Toronto Library and the various Laboratories of the University, have free access to the Victoria University Library, which consists of a working collection of over 25,000 bound volumes on the English, Latin, Greek, French and German languages and literatures, History, Philosophy the various departments of Theology.

The College has loaned to the Royal Ontario Museum its mineralogical, palaeontological and biological collections, as well as its collection of Egyptian and Indian relics.

### **Students not in Residence.**

All students who do not reside in any one of the Residences or who do not reside with their parents or with such persons as their parents or guardians direct, are recommended to board and lodge in such houses as are approved by the President of the College. A carefully selected list of boarding-houses, where board and rooms may be obtained at prices varying from \$4.00 to \$6.00 a week, is prepared each year by the Young Men's Christian Association. Students will be expected to observe proper hours and to maintain the conduct of Christian ladies and gentlemen.

### **Burwash Hall, Residence for Men.**

The buildings comprise one hundred and sixteen bedroom-studies, and in each house there is a common room with a large fire-place on the ground floor with a Tutor's bedroom and sitting room on the second floor. About fifteen bedrooms have fire-places, and in one house there are two suites each consisting of a bedroom and a study.

The Hall is a perpendicular Gothic building capable of seating 250 persons at meals; used as a hall for lectures, it will seat about 800.

The majority of the rooms will be rented to students at \$2.50 per week. For some few rooms a charge of \$3.00 or \$3.50 a week will be made. The price of board will be \$3.25 a week.

Applications for rooms should be addressed to the Dean of Residence, Mr. C. V. Massey, B.A., Victoria College, Toronto.

### **Residences for Women.**

In the year 1896 the late Mr. Hart A. Massey bequeathed to Victoria College a sum of money with which to erect a residence for the women students of the College. In the autumn of 1903 the building was ready for occupation.

Annesley Hall comprises, on the ground floor, a reception-room, library, common-room, offices, assembly-hall and dining-room. The first and second floors furnish students' rooms numbering thirty-nine single, and ten double rooms. On the second floor there is an infirmary with two single wards, a large ward, a bathroom, a nurse's room and a diet kitchen, all of which can be isolated from the rest of the building. The heating is by steam and the lighting by electricity.

A trained nurse is a regular member of the staff. Tennis and basketball courts, skating, hockey, a gymnasium and shower baths provide opportunity for physical development.

In 1906, a second Hall on the College grounds was secured, known as South Hall, with accommodation for eighteen students. Both Halls are under the same Committee of Management and under the same form of government. Self-government has been adopted and has thus far proved successful.

Applications for rooms must be accompanied by a deposit fee of \$10.00, which will be returned if the application is withdrawn before September first. Fees for the year range from \$175 to \$225, according to the size and location of the room, and are payable, half on the first of October, and half on the first of February. Students may use the laundry for an extra fee of one dollar a year.

Applications for rooms as well as all enquiries in regard to rules and regulations should be addressed to Miss M. E. T. Addison, B.A., Dean of Residence, Annesley Hall, Queen's Park, Toronto.

**Campus.**

The Board of Regents owns a large block of land north of the College, which gives space for a students' campus.

On this ground has been erected a building to meet the requirements of the men students for athletics. In it are found shower-baths, locker rooms, and basketball area.

**MEDALS, SCHOLARSHIPS AND PRIZES, 1913.****Fourth Year.**

The Prince of Wales Gold Medal (1st in General Proficiency).....	No award.
The Prince of Wales Silver Medal (2nd in General Proficiency).....	No award.
The Governor-General's Silver Medal (1st in Honour English).....	A. L. Smith ranked for this. No award.
The Edward Wilson Gold Medal (Orientals)	W. J. Mumford.
The S. H. Janes Silver Medal (Classics)...	No award.
The J. J. Maclaren Gold Medal (Moderns)	Miss V. L. Whitney.
The S. H. Janes Silver Medal (Moderns)...	Miss L. I. Douglass.
Gold Medal (English and History—Moderns).....	J. D. Robins.
The E. J. Sanford Gold Medal (Philosophy)	J. Line.
The S. H. Janes Silver Medal (Philosophy)	A. L. Smith.
The Silver Medal (Mathematics and Physics).....	Miss R. M. Evans.
The George A. Cox Gold Medal (Natural Science).....	W. W. Barraclough.
The S. H. Janes Silver Medals (Natural Science).....	{ A. C. Hazen } { J. R. Smith } aeq.
The W. J. Robertson Prize (Can. Const. Hist.).....	H. C. Jeffries.

**Third Year.**

The Bell Scholarship (Classics).....	H. G. Robertson.
The Class of 1893 Bursary.....	E. D. Beynon.
The Hodgins Prize (1st in Pass English)...	L. S. Albrigh

**Second Year.**

The Classical Scholarship (Classics).....	H. Bennett.
The Webster Prize (1st in Pass English)...	L. G. Hutton.
The Robert Johnston Prize (1st in Pass Hebrew).....	L. G. Hutton.

**First and Second Years.**

Regents' Prizes (1st and 2nd English Essays)  $\left\{ \begin{array}{l} \text{Miss E. M. Granger} \\ \text{P. A. W. Wallace} \end{array} \right\}$  aeq.

**First Year.**

The Robertson Scholarship (Classics) . . . . . No award.  
 The Class of 1902 Prize (1st in Pass  
 English) . . . . . E. F. Church.

**Junior Matriculation, 1913.**

The Martha Bell Scholarship  $\left\{ \begin{array}{l} \text{G. M. Huycke} \\ \text{W. W. Whittaker} \end{array} \right\}$  (Classics) aeq.  
 The Flavell Scholarship  $\left\{ \begin{array}{l} \text{G. M. Huycke} \\ \text{W. W. Whittaker} \end{array} \right\}$   
 The W. E. H. Massey Scholarship (Classics) W. G. Hardy.

**MEDAL AND SCHOLARSHIPS.**

AWARDED BY THE SENATE OF THE UNIVERSITY OF  
 TORONTO TO THE STUDENTS OF VICTORIA COLLEGE.

**First Year.**

The Bankers' Scholarship . . . . . L. W. Moffit.  
 The Alexander T. Fulton Scholarships . . . . . 2. R. M. Taylor.

**Second Year.**

The Edward Blake Scholarship in Physics. A. C. Lewis.  
 The John Macdonald Scholarship in  
 Philosophy . . . . . L. G. Hutton.

**Third Year.**

The Daniel Wilson Scholarship in Biology. H. B. Sifton.  
 The Alexander Mackenzie Scholarships in  
 Political Science . . . . . 2. W. M. Smith.

**Fourth Year.**

Governor-General's Gold Medal . . . . . A. L. Smith.  
 "Industrial Canada" Prizes . . . . . 1. W. J. Little.

**AFFILIATED COLLEGE. .****ALBERT COLLEGE.**

BELLEVILLE, ONT.

FOUNDED 1854.

**Faculty.**THE REV. E. N. BAKER, M.A., D.D., *President.*

ELLA GARDINER, B.A.

F. J. R. STAPLES, B.A., *Secretary.*

NORVAL J. IRELAND, B.A.

E. L. BURRILL.

D. A. CAMERON.

J. ROOT.

ANNIE HARDIE.

MADELINE YOUNG, B.A.

LAURA LA VOIE.

JESSIE TUITE.

ELLA SPARGO.

EVA LA VOIE.

FANNY STRONG.

JENNIE HUGHSON.

MARY L. COPELAND.

**Courses of Study.**

- I. Collegiate Course, embodying elective undergraduate studies.
- II. Junior or Senior Matriculation in Arts, Civil Engineering, Law, Medicine and Theology.
- III. Teachers' Course, to prepare for teachers' examinations.
- IV. Preliminary Course, as prescribed by the General Conference of the Methodist Church.
- V. Business College Course, comprising Theoretical and Practical Bookkeeping, Practical English, Shorthand and Typewriting.
- VI. Musical Course in Musical Academy, comprising Pianoforte Course, Organ Course, Post-Graduate Course and Voice Culture.
- VII. Course in Fine Arts, embracing Painting, Drawing, etc.
- VIII. Course in elocution and Physical Culture.
- IX. Course in Domestic Science and Art.
- X. Alexandra Ladies' College Course, leading to the M.L.A. and M.M.L.



**ONTARIO LADIES' COLLEGE**  
AND  
**ONTARIO CONSERVATORY OF MUSIC AND ART.**  
WHITBY, ONT.

**Officers of the Faculty.**

REV. J. J. HARE, PH.D.....	<i>Governor and Principal.</i>
MISS TAYLOR, B.A.....	<i>Lady Principal.</i>
W. J. GREENWOOD, B.A.....	<i>Secretary.</i>
MISS E. L. GARDINER.....	<i>Registrar and Accountant.</i>

**FACULTY.**

**College of Literature and Science.**

REV. J. J. HARE, PH.D.,	<i>Psychology, Bible, etc.</i>
W. J. GREENWOOD, B.A.,	<i>Classics, Logic and Mathematics.</i>
MISS TAYLOR, B.A.,	<i>English Literature.</i>
MISS FINDLAY, B.A.,	<i>German, French and Italian.</i>
MISS GORDON, M.A.,	<i>Natural Science.</i>
MISS PORTE, B.A.,	<i>Chemistry of Foods.</i>
MISS NEWTON, B.A.,	<i>English.</i>
MISS F. O'BRIEN,	<i>Oratory.</i>
MISS WEIR,	<i>Bookkeeping and Junior English.</i>
MISS BOYD,	<i>Junior English.</i>

**Ontario Conservatory of Music.**

*In affiliation with Toronto Conservatory of Music.*

G. D. ATKINSON, ESQ.,	<i>Director, Piano and Pipe Organ.</i>
A. BLIGHT, ESQ.,	<i>Vocal Music.</i>
MISS NICHOLS, MUS.BAC.,	<i>Harmony and Piano.</i>
MISS K. WRIGHT, A.O.C.M.,	<i>Piano and Organ.</i>
MISS CLOUGH, A.T.C.M.,	<i>Piano.</i>
MRS. HOMUTH, A.O.C.M.,	<i>Piano.</i>
MISS ALICE GOTT, A.T.C.M.,	<i>Vocal Music and Sight Singing.</i>
MISS LENA HAYES, A.T.C.M.,	<i>Violin, Mandolin, etc.</i>

**College of Fine Art.**

C. M. MANLY, R.C.A., Director, *Drawing, Painting, etc.*

MISS N. WRIGHT, *Assistant in Drawing, Painting, etc.*

**College of Oratory.**

MISS F. O'BRIEN, *Assisted by Teachers of the Literary Department.*

**Commercial College.**

MISS WEIR, *Bookkeeping, Commercial Law, Stenography, Typewriting, etc.*

*Assisted by Teachers of the Literary Department.*

**College of Domestic Science.**

MISS E. PORTE, B.A., *Chemistry of Foods, Cooking, etc.*

MISS DONALDSON, *Art Needlework.*

MISS GORDON, B.A., *Natural Science.*

MISS BOYD, *Domestic Art.*

**Exercise.**

MISS F. O'BRIEN, *Physical Culture.*

MISS BEATON, *Swimming.*

MR. CROSS, *Riding.*

**Household Management.**

MRS. MCFADYEN, *Matron and Dietitian.*

MISS WHITE, *Trained Nurse.*

The curriculum of literary studies extends through the first two years' work of the University with honours in Moderns. In the department of Music, students who desire it are prepared for the examinations conducted by the Toronto Conservatory of Music, or for those of the University of Toronto. A large pipe organ is provided for the use of organ students. The department of Fine Art, Oratory, Commercial Subjects and Household Science are in a high degree of efficiency.

# **ALMA COLLEGE.**

ST. THOMAS, ONT.

OPENED 1881.

## **Administrative Officers.**

ALBERT CARMAN, M.A., D.D., LL.D.....	<i>President of Board.</i>
JOSEPH R. GUNDY, D.D.....	<i>Chairman of Executive.</i>
ROBERT I. WARNER, M.A., D.D.....	<i>Principal.</i>
ELLA D. BOWES, B.A.....	<i>Lady Principal.</i>
ALICE F. HENWOOD, B.A.....	<i>Registrar.</i>
BEULAH SPURR.....	<i>Librarian.</i>
GERTRUDE JOHNSON.....	<i>Office Secretary.</i>

## **Literary Department.**

ROBERT I. WARNER, M.A., D.D.....	<i>Bible Study, Psychology.</i>
ELLA D. BOWES, B.A.....	<i>English, German.</i>
ALICE F. HENWOOD, B.A.....	<i>Latin, French.</i>
WM. CORNFORTH.....	<i>Mathematics, Science.</i>
BEULAH SPURR.....	<i>Preparatory Studies.</i>
LA VERA MUXWORTHY.....	<i>History, Geography, Biology.</i>

## **Music.**

THOMAS MARTIN, Director,	<i>Pianoforte, Concert Solos.</i>
J. H. JONES, Organ,	<i>Pianoforte, Harmony, Choral.</i>
HARRIETT A. JOLLIFFE, A.A.C.M.,	<i>Pianoforte.</i>
J. PARNELL MORRIS, Singing,	<i>Voice Production.</i>
HELEN M. THOMPSON, A.A.C.M.,	<i>Pianoforte.</i>
AILEEN MARIE THOMPSON,	<i>Violin.</i>
MARGARET L. PRESTON, L.R.A.M., A.R.C.M.,	<i>Singing, Pianoforte.</i>

## **Fine Arts.**

WM. ST. THOMAS SMITH, A.R.C.A., Director,	<i>Painting, Drawing and Sketching.</i>
MRS. ST. THOMAS SMITH,	<i>Painting, Modelling and Sketching.</i>
S. M. MCKAY,	<i>China Painting.</i>
MAY V. PROCUNIER,	<i>Drawing, Pen and Ink, Design, Wood and Metal Work.</i>

**Commercial Science.**

ILLA A. MCEWEN, *Bookkeeping, Phonography, Typewriting and Penmanship.*

**Elocution and Physical Culture.**

MAY WALKER, A.T.C.M., *Reading, Expression, Physical Culture.*

**Household Science.**

ELSIE I. MCKIM, *Cookery, Dietaries, Sewing.*

**Diploma Courses.**

(a) M.L.A. and M.E.L., embracing University Junior and Senior Matriculation, with options and additional subjects in Bible Study, English, etc.

(b) Music (Piano, Organ, Voice or Violin).

(c) Fine Art.

(d) Elocution and Physical Culture.

(e) Commercial and Shorthand.

(f) Household Science.

**COLUMBIAN COLLEGE.**  
NEW WESTMINSTER, B.C.

FOUNDED 1892.

**Administrative Officers.**

<i>Principal</i> .....	A. M. SANFORD, B.A., D.D.
<i>Vice-Principal</i> .....	F. N. STAPLEFORD, M.A.
<i>Lady Principal</i> .....	MISS G. E. EVANS, B.A.

**Faculty.**

A. M. SANFORD, B.A., D.D. (Mt. Allison),	Principal, <i>New Testament Exegesis and Systematic Theology.</i>
A. E. HETHERINGTON, B.A., B.D. (Honour Graduate, Silver Medallist, Man. University),	<i>Old Testament Exegesis and History.</i>
F. N. STAPLEFORD, M.A. (Toronto),	<i>History and Biology.</i>
VICTOR DOLMAGE, B.A. (Man.),	<i>Science.</i>
H. A. LOGAN, B.A. (Acadia, Yale),	<i>Mathematics.</i>
R. B. CRUMMY, B.A. (Man.),	<i>Classics.</i>
F. W. HARDY, M.A., B.D. (Toronto),	<i>Homiletics and N. T. History.</i>
MISS C. EVANS, B.A. (Mt. Allison),	<i>German, English.</i>
MISS THORA E. HUTTON, B.A. (Toronto),	<i>French.</i>
MISS M. WINTERS,	<i>Voice.</i>
MISS CLARA M. SMITH,	<i>Piano.</i>
J. J. F. AINSLEY,	<i>Theory.</i>
MISS FLORENCE V. GIBBARD,	<i>Household Science.</i>
A. E. ETHERINGTON,	<i>Commercial Master, Bookkeeping.</i>
MISS A. LOREE,	<i>Stenography, Typewriting.</i>

**Courses of Study.**

Preparatory Course of one year.

Collegiate Course of four years.

Matriculation in Arts, Law, Medicine, Engineering, etc.

Senior Matriculation and First Year Arts, University of Toronto.

Second Year Arts, University of Toronto.

Ladies' College Course leading to degrees in M.E.L. and M.L.A.

Theology—Preliminary, Conference Probationer's Course, as prescribed by the General Conference of the Methodist Church of Canada.

Theology Courses leading to B.D. and S.T.L. degrees.

Course for Teachers' Certificates in all grades.

Music—Courses in Piano, Voice, Theory.

Courses in Stenography, Typewriting and Bookkeeping.

Courses in Household Science.







**TRINITY COLLEGE.**

**TRINITY COLLEGE.****I. Trinity College, with Residence for Men.**

THE REV. T. C. STREET MACKLEM, M.A., D.D., LL.D., D.C.L., Provost.

A. H. YOUNG, M.A., *Registrar*.

REV. H. T. F. DUCKWORTH, M.A., *Dean of Residence*.

REV. T. STANNAGE BOYLE, M.A., D.D., *Dean of Divinity*.

G. S. BRETT, M.A., *Librarian*.

SYDNEY H. JONES, ESQ., *Bursar*.

**II. St. Hilda's College—Residence for Women.**

MISS M. CARTWRIGHT, B.A., *Principal*.

MISS M. E. STRACHAN, *Assistant*.

MISS C. E. KÄMMERER, M.A., *Assistant*.

MISS COTTERILL, *Assistant*.

SYDNEY H. JONES, ESQ., *Bursar*.

Trinity College, which entered into federation with the University of Toronto on the first day of October, 1904, was founded by the Honourable and Right Reverend John Strachan, D.D., LL.D., first Bishop of Toronto, one of the founders, and at one time President, of King's College. It was established, after the secularisation of King's College in 1850, for the purpose of combining religious instruction with a liberal education.

In 1851 Trinity College was incorporated by the Legislature of Canada. In 1852 a Royal Charter conferred upon it University powers, which were exercised continuously down to 1904, under the style of the University of Trinity College.

For a certain period state aid was granted to it in common with the other Universities of the Province, but this was subsequently withdrawn. In 1874 the question of federation was mooted, but no serious attempt at a solution was made till about the year 1885; and it was not till nearly twenty years later that satisfactory terms of federation were finally concluded.

The College, while continuing to teach all of those subjects which, under the Acts of 1887, 1901, and 1906, are allotted to University College, Victoria College and St. Michael's College, has given up, as did University College and Victoria College, its teaching in the subjects assigned to the University. The students of Trinity College are admitted to the University classes and examinations on the same terms as those of the other two Colleges just mentioned. In addition to this privilege, lectures in most of the subjects of the General Course and in several Honour Subjects are delivered in Trinity College by Professors and Lecturers of the University.

The undergraduates enrolled before October, 1903, who did not before September 30th, 1910, complete their course under the Trinity Calendar then in force, will have to apply to the Registrar of the University for leave to have their Trinity examinations accepted by the University.

Religious instruction for all its students in Arts was one of the chief reasons for the foundation of the College, and this still remains one of its distinguishing features.

Residence is another peculiar advantage offered by the College, accommodation being provided for about 100 men students. Here they come into close contact daily with one another and with the members of the staff, both resident and non-resident. In this way one more important element in education is provided.

The women students attend lectures with the men, but they have a separate residence in St. Hilda's College, founded in 1888 by the Reverend Dr. Body, the second Provost of Trinity College. St. Hilda's College is a well-equipped building and stands in the northwest corner of Trinity College grounds. Hence it is convenient for attendance at lectures. It offers to women all the advantages offered to men by the residence of Trinity College. All the women students, resident and non-resident, come under the supervision of an experienced Lady Principal, Miss M. Cartwright, B.A., late of Lady Margaret Hall, Oxford, but the Annex, known as St. Hilda's Lodge, is under the immediate charge of Miss M. E. Strachan, granddaughter of the founder of Trinity. A third building, in Crawford Street, is under the charge of Miss C. E. Kämmerer, M.A. These three buildings provide accommodation for fifty students or more.

On week days both men and women attend the morning and evening services of the Chapels of their respective colleges. On Sundays they attend the Trinity College Chapel together, this latter regulation applying to residents and non-residents alike.

Though the College belongs to the Church of England, it is open without religious tests to members of other communions. They are allowed to absent themselves from the Chapel services on Sundays on stating to the Provost their intention to attend a particular church of their own denomination, on the understanding that they will present a certificate of attendance, so as to satisfy the College conditions in this respect.

Members of other communions are not required to take the courses of study prescribed in the Church Catechism and the Prayer Book, but are allowed to substitute for them courses in Church History, the Evidences of Christianity, or Christian Ethics.

All students are required to keep term in lectures and chapels, and upon enrolling are placed under promise to obey the rules and regulations of the College.

Tuition (or registration) fees for regular and special students are the same as are paid in the other Colleges and are payable to the Bursar of Trinity College. On board fees there is a discount of 10 per cent. allowed if the accounts for the term are paid within one month of its opening.

Particulars as to the amount of board fees, room rents, and the like may be obtained by applying to the Provost.

### **Hazing.**

Every student of Trinity College is required to sign the following declaration:—

"I do solemnly promise, that so long as I remain a student of this College—

1. I will discountenance all proceedings commonly known as hazing and will do my utmost to promote a healthy tone of feeling against them.

2. And, in particular, I will not interfere in any way with the personal liberty of any student, as, for example, by entering into, or remaining in, his room against his will; and I will not subject any student, or countenance his being subjected, to any indignity of any kind whatsoever.

These promises I make, fully understanding that any violation of them will render me liable to immediate expulsion from the College."

### **University Discipline.**

Every regular student of Trinity College must conform to the regulations of the University when in attendance upon University lectures and examinations. He must also pay the Library fee and other University fees to the Bursar of the University.

### **Keeping Terms.**

The College regulations require regular attendance at both lectures and chapels. If a student misses more than twenty-five per cent. of the lectures delivered in the term in each course which he is required to take, he will lose his term. He must attend not less than fifty per cent. of the chapel services in each term, except as otherwise provided for.

Students in Arts who are unsatisfactory in regard to their work or conduct will not be certified to the Registrar of the University as having kept their term; without this certificate they will not be admitted by him to the University examinations in May.

### **Non-Matriculated Students.**

Students may be admitted to College by the Provost without matriculation if he deems them to be sufficiently advanced in their studies to profit by the lectures.



## **GOVERNMENT OF THE COLLEGE.**

By the provisions of the Royal Charter, the government of the University of Trinity College is vested in the Corporation, which body, by an Act of the Legislature of the Province of Canada (15 Vict. ch. 32), is composed of: 1. The Bishops of the six Dioceses into which the original Diocese of Toronto has been divided; 2. The Trustees; 3. The Council.

The Council is made up of the following classes of members:

### **Ex Officio Members.**

The Chancellor and ex-Chancellors of the University of Trinity College, the Provost, the Registrar of the University of Trinity College, the Dean of Divinity and the Dean of Residence of Trinity College, Emeritus Professors, the Chairman of Convocation for the time being, and the Headmaster of Trinity College School, Port Hope.

### **Members Nominated.**

By the Synod of each Diocese of the Province of Ontario, two clergymen and two laymen.

By the Bishops of Ottawa, Algoma, Ontario, Huron, Toronto and Niagara, four members each, representing their respective Dioceses, or two only, if the Synod of the Diocese elects members.

By each Medical, Musical, or Theological College affiliated with the University of Trinity College, one member.

### **Members Elected.**

By the College Committee, one of the professors.

By the graduates in Arts and Divinity who are members of Convocation (see below) eight members, to hold office for four years, two retiring annually.

By the graduates in Law two members, to hold office for two years, one retiring annually.

By the graduates in Medicine who are members of Convocation two members, to hold office for two years, one retiring annually.

By the associate members of Convocation (see below) two members, to hold office for two years, one retiring annually.

By the whole Corporation ten members, elected for four years, of whom at least two shall be engaged in educational work in the High School system of the Province.

### **Chancellor.**

(To be elected.)

### **Vice-Chancellor.**

THE REV. T. C. STREET MACKLEM, M.A., D.D., LL.D., D.C.L.

**The Corporation.**

THE MOST REVEREND THE LORD ARCHBISHOP OF OTTAWA.  
 THE RIGHT REVEREND THE LORD BISHOP OF ALGOMA.  
 THE RIGHT REVEREND THE LORD BISHOP OF ONTARIO.  
 THE RIGHT REVEREND THE LORD BISHOP OF HURON.  
 THE RIGHT REVEREND THE LORD BISHOP OF TORONTO.  
 THE RIGHT REVEREND THE LORD BISHOP OF NIAGARA.

**Trustee.**

THE HON. FEATHERSTON OSLER, K.C., D.C.L.

**Council.**

*Ex Officio Members.*

*Chancellor of the University of Trinity College.*

THE REV. T. C. STREET MACKLEM, M.A., D.D., LL.D., D.C.L.,  
*Provost of Trinity College.*

A. H. YOUNG, M.A.,  
*Registrar of the University of Trinity College.*

THE REV. T. STANNAGE BOYLE, M.A., D.D.,  
*Dean of Divinity.*

THE REV. H. T. F. DUCKWORTH, M.A.,  
*Dean of Residence.*

D. J. GOGGIN, M.A., D.C.L.,  
*Chairman of Convocation.*

THE REV. F. GRAHAM ORCHARD, M.A.,  
*Headmaster of Trinity College School, Port Hope.*

*Representative Elected by the College Committee.*

THE REV. F. H. COSGRAVE, B.A., B.D.,  
*Professor of Hebrew and Old Testament.*

*Elected by the Corporation.*

THE REV. PROFESSOR C. J. S. BETHUNE, M.A., D.C.L., Guelph.  
 W. R. BROCK, Esq., Toronto.  
 COL. SIR. H. M. PELLATT, Q.O.R., A.D.C., C.V.O., D.C.L., Toronto.  
 SIR EDMUND OSLER, M.P., Toronto.  
 FREDERIC NICHOLLS, Esq., Toronto.  
 PETER PERRY, M.A., Waterdown.  
 ALEX. BRUCE, K.C., Toronto.  
 J. A. HOUSTON, M.A., Toronto.  
 J. A. WORRELL, K.C., M.A., D.C.L., Toronto.  
 KIRWAN MARTIN, M.A., Toronto.  
 N. F. DAVIDSON, K.C., M.A., Toronto.

*Representatives of the Diocese of Ottawa.*

J. TRAVERS LEWIS, K.C., M.A., D.C.L., Ottawa.  
 THE VEN. J. J. BOGERT, M.A., D.C.L., *Archdeacon of Ottawa.*  
 THE REV. RURAL DEAN A. W. MACKAY, B.D., Ottawa.  
 CHARLES MORSE, K.C., D.C.L., Ottawa.

*Representatives of the Diocese of Algoma.*

THE VEN. GOWAN GILLMOR, D.D., *Archdeacon of Algoma*, Sault Ste. Marie.  
 THE REV. CANON BOYDELL, M.A., Sudbury.  
 THE REV. CANON PIERCY, Sault Ste. Marie.  
 THE REV. CANON HEDLEY, M.A., Port Arthur.

*Representatives of the Diocese of Ontario.*

THE RIGHT REV. E. J. BIDWELL, M.A., D.D., *Bishop of Kingston.*  
 THE VERY REV. G. L. STARR, M.A., *Dean of Ontario*, Kingston.  
 THE REV. H. H. BEDFORD JONES, M.A., Brockville.  
 HIS HONOUR JUDGE McDONALD, D.C.L., Brockville.  
 THE REV. RURAL DEAN G. R. BEAMISH, M.A., Belleville.  
 W. B. CARROLL, K.C., B.A., Gananoque.

*Representatives of the Diocese of Huron.*

HIS HONOUR JUDGE HOLT, Goderich.  
 THE VEN. G. C. MACKENZIE, D.C.L., Brantford.  
 THE REV. CANON DAVIS, B.A., Sarnia.  
 RICHARD BAYLY, K.C., London.

*Representatives of the Diocese of Toronto.*

THE REV. CANON BROUGHALL, M.A., D.D., Toronto.  
 THE REV. CANON PLUMPTRE, M.A., Toronto.  
 THE REV. CANON RIGBY, M.A., LL.D., Toronto.

*Representatives of the Diocese of Niagara.*

THE VEN. G. F. DAVIDSON, M.A., *Archdeacon of Wellington*, Guelph  
 THE REV. CANON SUTHERLAND, M.A., Hamilton.  
 J. H. COLLINSON, M.A., Hamilton.  
 H. GUMMER, ESQ., Guelph.  
 C. S. SCOTT, ESQ., Hamilton.

*Elected by Convocation.**By Graduates in Arts and Divinity.*

ELMES HENDERSON, M.A., Toronto.

C. S. MACINNES, M.A., Toronto.

ROBERT J. READE, M.A., M.D., C.M., D.D.S., Toronto.

THE REV. E. C. CAYLEY, M.A., Toronto.

R. B. BEAUMONT, M.A., Toronto.

THE REV. J. S. BROUGHALL, M.A., Toronto.

GLYN OSLER, B.A., Toronto.

THE REV. R. W. W. ALLEN, M.A., Whitby.

*By Graduates in Law.*

D. T. SYMONS, K.C., B.C.L., Toronto.

HON. F. E. HODGINS, K.C., B.C.L., Toronto.

*Representatives of Graduates in Medicine.*

W. H. PEPLER, M.D., C.M.

ARTHUR JUKES JOHNSON, M.B., Toronto.

*Elected by Associates of Convocation.*

F. GORDON OSLER, ESQ., Toronto.

J. A. KÄMMERER, ESQ., Toronto.

*Elected by the Alumnae of St. Hilda's College.*

M. McLAUGHLIN, ESQ., Toronto.

G. B. STRATHY, M.A., Toronto.

*Nominated by the Toronto Conservatory of Music.*

ALBERT HAM, Mus. Doc., F.R.C.O., Toronto.

**Secretary and Bursar.**

SYDNEY H. JONES, ESQ.

**Board of Endowment and Finances.**SIR EDMUND OSLER, M.P.,  
*Chairman.*FREDERIC NICHOLLS, ESQ.,  
*Vice-Chairman.*

W. R. BROCK, ESQ.

J. E. SEAGRAM, ESQ.

SIR WILLIAM MACKENZIE.

REV. T. C. S. MACKLEM, M.A., D.D.,

COL. SIR H. M. PELLATT, Q.O.R.,  
A.D.C., C.V.O., D.C.L., *Treasurer.*LL.D., D.C.L., *Secretary.*

**Convocation.**

Convocation, as at present organized, consists (in addition to the Chancellor, the Provost, and the Professors of Trinity College) of all graduates who pay an annual fee of five dollars or upwards. It has been placed by the Corporation in the position of a Standing Committee of that body; and its members are in this way enabled, through their representatives, formally to lay their resolutions before the governing body of the University. Moreover, it is represented by fourteen members on the Corporation. (See above.) The Chairman is *ex officio* a member of the Corporation.

An annual meeting for the transaction of business and granting degrees in Divinity is held every year in the Michaelmas Term.

Friends of the University who are not graduates may become associate members of Convocation by the same annual payment of five dollars or upwards. Subscribers of a hundred dollars and upwards annually are known as sustaining members upon their election by the Executive Committee of Convocation.

Associate and Sustaining Members have the right of speaking and of voting at annual and other meetings of Convocation. They also elect annually a member of the Council.

Members and Associates of Local Associations have equal privileges in the government of the same. Each Local Association elects one member to represent it upon the Executive Committee of Convocation.

The Chancellor of the University of Trinity College is elected for a period of five years by the graduate members of Convocation in good standing.

The Caput of Convocation consists of the Vice-Chancellor and four members of Convocation, to be elected by Convocation at the annual November meeting.

Since federation the only degrees conferred by the University of Trinity College are those in the Faculty of Divinity.

**Chairman of Convocation.**

D. J. GOGGIN, M.A., D.C.L.

**Clerk of Convocation.**

PROFESSOR A. H. YOUNG, M.A.

**Executive Committee.**

(1) *Ex officio Members*—The Chancellor, the Chairman, the Clerk, the Provost, the Vice-Provost, the Registrar of the University of Trinity College, the Dean of Residence, and former Chairmen of Convocation—J. A. Worrell, K.C., M.A., D.C.L.; D. T. Symons, K.C., B.C.L., and R. B. Beaumont, M.A.



*(2) Elected Members:*

The Rev. W. J. Brain, M.A.,  
 The Rev. W. J. Creighton, M.A.,  
 Professor H. C. Simpson, M.A.,  
 Philip Dykes, Esq.,  
 W. H. Fairbairn, Esq.,  
 P. J. Henderson, Esq.,

Hon. F. E. Hodgins, K.C., B.C.L.,  
 Sydney H. Jones, Esq.,  
 H. C. Osborne, M.A.,  
 W. H. Pepler, M.D., C.M.,  
 G. B. Strathy, M.A.,  
 J. C. Wedd, Esq.

**Scholars and Prizemen.****1913.****Arts.**

H.R.H. the Governor-General's Silver Medal for the Headship of the College: George Frederick Kingston.

H.R.H. the Governor-General's Bronze Medal for the Headship of St. Hilda's College: Not awarded.

Prize for the Highest First Class Honours in Philosophy: George Frederick Kingston.

Prize for the Highest First Class Honours in Teutonic Languages: Martha G. Elliott.

Prize for the Highest First Class Honours in Greek and Hebrew: Victor Osmund Boyle.

The Prince of Wales' Prize for the Highest First Class Honours in Classics: Sinclair McLardy Adams.

The Jubilee Scholarship: George Frederick Kingston.

**Third Year.**

The Wellington Scholarship in Classics: A. K. Griffin.

The Burnside Scholarship in English and History with the Modern Option: Mary J. Clarke.

The Dickson Scholarship in Science: A. D. Hone.

The College Scholarship in Modern History: O. Annie Reed.

**Second Year.**

The Wellington Scholarship in Classics: R. A. Hendy.

The Dickson Scholarship in Modern Languages: Marguerite Clench.

The Dickson Scholarship in Science: D. A. Keys.

**First Year.**

The Dickson Scholarship in Science: R. Forsyth.

**Junior Matriculation.**

**1913.**

The Wellington Scholarship in Classics: Miss F. C. Ross, Brockville C.I.  
The Bishop Strachan Scholarship in Classics: C. K. C. Martin, Ridley College.

Dickson Scholarship in Modern Languages:	}	Miss S. B. Stewart, Ottawa C.I.
Burnside Scholarship in English and History:		
The Wellington Scholarship in Mathematics:		
The Leonard McLaughlin Scholarship: V. Maclean Howard, U.C.C.		
The Burnside Scholarship in Mathematics:	}	W. D. E. Donaldson, Ottawa C.I.
The Dickson Scholarship in Science:		

**Divinity Class Prize List.**

**1913.**

**Third Year.**

General Proficiency: P. A. Paris.

**Second Year.**

General Proficiency: F. W. Colloton.  
Special Proficiency: S. F. Tackaberry, B.A.  
Old Testament Dogmatics: F. W. Colloton.  
Proxime Accessit: S. F. Tackaberry, B.A.  
Liturgics and Apologetics: F. W. Colloton.  
Patristics: A. H. Priest, B.A.

**First Year.**

General Proficiency:	}	A. H. Priest, B.A.
New Testament Subjects:		
Old Testament Subjects:		
Early Church History:		

**All Years.**

Hebrew: F. W. Colloton.  
Greek Testament: M. I. Machell.  
Special Greek Testament: A. H. Priest, B.A.  
Hamilton Memorial }  
Boyle Prize } F. W. Colloton.  
McDonald Prizes for General Bible Knowledge: 1. A. H. Priest, B.A.;  
2. H. A. E. Clarke, B.A.; 3. R. F. Palmer.

**READING PRIZES:**

College: P. W. A. Roberts.  
Doolittle (for Improvement): W. A. B. Philp.  
Osler: 1. P. W. A. Roberts; 2. W. A. B. Philp; 3. H. A. E. Clarke, B.A.



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**ST. MICHAEL'S COLLEGE.**

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### ST. MICHAEL'S COLLEGE.

St. Michael's College was founded in 1852, at the request of the Rt. Rev. Dr. de Charbonnel, then Bishop of Toronto. It was established for the purpose of combining religious instruction with a liberal education.

For a number of years it was granted state aid, in common with the other arts colleges of the Provinces. This came to an end when the Legislature of Ontario finally decided that no financial assistance should thereafter be given to denominational institutions.

In 1881, the College was affiliated with the University of Toronto, an arrangement having been entered into by which students proceeding to the degree of B.A. should attend lectures at University College in all subjects excepting Philosophy and History.

When in 1883-1884 a movement was on foot looking to the federation of every denominational college of the Province with the Provincial University, St. Michael's was the first to accept the terms proposed, and in 1890, federated upon the proclamation of the University Federation Act.

From the commencement it was understood that such arrangements could not be other than experimental, and meanwhile it became more and more apparent that the experiment must end in failure. After a quarter of a century of affiliation and federation, during which time the University population had been multiplied by five or six, there was scarcely any increase in the number of Catholic students attending University College. During those same years, the Catholic Colleges of the Province had been constantly increasing in the number of their students. It was evident that the plan in operation was not of the kind to secure the confidence of the Catholic population. That population evidently would not favour a purely secular education.

In 1905, St. Michael's found itself in a position to enter upon a scheme of providing instruction in all subjects known as "College Subjects", and made application to be admitted to federation on the same terms as Victoria and Trinity Colleges, claiming with them the privilege of free instruction for its students in University subjects. In response to this application, provision was made in the University Act of 1906 for the development of this scheme, upon the completion of which St. Michael's succeeds to the rank and privileges of a "College of the University". This plan has been worked out with the most satisfactory results.

The Catholic Church does not understand education without religious instruction. In St. Michael's, in every year of the student's course, a due proportion of time is reserved for this, and for the preservation of the



religious spirit the greater number of the staff is chosen from the ranks of the clergy. It must be remembered, however, that St. Michael's is purely an Arts College, and has no theological faculty as such.

It is held as a fundamental principle, that the intimate association of students with one another, and with their teachers, contributes as much to true education as do the lecture room and library. In accordance with this, the majority of the students live in residence. Also it is strictly required that the Professors live in residence, in the most intimate relations with the student body, and that they interest themselves in the doings of the campus and recreation halls, as truly as in class work.



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**FACULTY OF MEDICINE.**

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## COUNCIL OF THE FACULTY OF MEDICINE.

*President*.....ROBERT ALEXANDER FALCONER, D.LITT., LL.D.

*Chairman*.....CHARLES KIRK CLARKE, M.D., LL.D.

HENRY WILBERFORCE AIKINS, B.A., M.B.,

FRANCIS BARCLAY ALLAN, M.A., PH.D.,

JOHN ANDREW AMYOT, M.B.,

HARRY BERTRAM ANDERSON, M.D., C.M.,

ALIAN MACKENZIE BAINES, M.D., C.M.,

BENJAMIN ARTHUR BENSLEY, B.A., PH.D.,

GEORGE ARTHUR BINGHAM, M.B., M.D., C.M.,

GEOFFREY BOYD, B.A., M.B.,

THOMAS GREGOR BRODIE, M.D., F.R.S.,

JOHN PRICE BROWN, M.D.,

HERBERT ALEXANDER BRUCE, M.D.,

GEORGE HERBERT BURNHAM, M.D.,

ELI FRANKLIN BURTON, B.A., PH.D.,

IRVING HEWARD CAMERON, M.B., LL.D.,

GRAHAM CHAMBERS, B.A., M.B.,

CHARLES KIRK CLARKE, M.D., LL.D.,

ROBERT JOSEPH DWYER, M.B.,

\*JABEZ HENRY ELLIOTT, M.B.,

WILLIAM HODGSON ELLIS, M.A., M.B.,

JOHN FERGUSON, M.A., M.D.,

JOHN GERALD FITZGERALD, M.B.,

\*JAMES MOFFATT FORSTER, M.B.,

JOHN TAYLOR FOTHERINGHAM, B.A., M.D., C.M.,

\*LACHLAN GILCHRIST, M.A.,

WILLIAM GOLDIE, M.B.,

ANDREW ROBERTSON GORDON, M.B.,

\*DUNCAN A. GRAHAM, M.B.,

STEPHEN MOFFATT HAY, M.D.,

VELYIEN EWART HENDERSON, M.A., M.B.,

\*HENRY SEATON HUTCHISON, M.B.,

\*GOLDWIN WILLIAM HOWLAND, B.A., M.B.,

\*ARCHIBALD GOWANLOCK HUNTSMAN, B.A., M.B.,

\*WILLIAM WARNER JONES, B.A., M.B.,

FRANCIS BOTELER KENRICK, M.A., PH.D.

WILLIAM ROBERT LANG, D.Sc.,

JOHN BERESFORD LEATHES, B.A., M.B., B.Ch., F.R.S.,

ARCHIBALD BYRON MACALLUM, PH.D., Sc.D., LL.D., F.R.S.,

\*Lecturers and instructors as indicated by the asterisk shall act as Assessors only and shall not be entitled to vote.

- JAMES METCALFE MACCALLUM, B.A., M.D.,  
 \*WILLIAM JAMES MCCOLLUM, M.B.,  
 GEORGE RAYMOND McDONAGH, M.D.,  
 \*DONALD MCGILLIVRAY, M.B.  
 KENNEDY CRAWFORD MCILWRAITH, M.B.,  
 JOHN JOSEPH MACKENZIE, B.A., M.B.,  
 PATRICK WALTER HUGHES McKEOWN, B.A., M.B.,  
 JOHN CUNNINGHAM McLENNAN, B.A., Ph.D.,  
 JAMES PLAYFAIR McMURRICH, M.A., Ph.D.,  
 ALEXANDER MCPHEDRAN, M.B.,  
 ALBERT ANGUS MACDONALD, M.B.,  
 HENRY THOMAS MACHELL, M.D.,  
 \*WILLIAM JOHN OGILVIE MALLOCH, B.A., M.B.,  
 FREDERICK WILLIAM MARLOW, M.D., C.M.,  
 WILLIAM LASH MILLER, Ph.D.,  
 \*HAROLD CAMPBELL PARSONS, B.A., M.D., C.M.,  
 WILLIAM HUNTER PIERSOL, B.A., M.B.,  
 NEWTON ALBERT POWELL, M.D., C.M.,  
 ALEXANDER PRIMROSE, M.B., C.M.,  
 RICHARD ANDREW REFVE, B.A., M.D., LL.D.,  
 \*THOMAS BEDFORD RICHARDSON, M.D., C.M.,  
 ROBERT DAWSON RUDOLF, M.D., C.M.,  
 \*EDWARD STANLEY RYERSON, M.D., C.M.,  
 GEORGE STERLING RYERSON, M.D., C.M.,  
 \*WALLACE ARTHUR SCOTT, B.A., M.B.,  
 \*CHARLES BUCKINGHAM SHUTTLEWORTH, M.D., C.M.,  
 \*GIDEON SILVERTHORN, M.B.,  
 CLARENCE LESLIE STARR, M.B.,  
 FREDERIC NEWTON GISBORNE STARR, M.B.,  
 WILLIAM BROWN THISTLE, M.D.,  
 \*JOHN FRANKLIN UREN, M.D., C.M.,  
 BENJAMIN PHILP WATSON, M.D.,  
 \*JAMES CRAWFORD WATT, B.A., M.B.,  
 EDMUND MURTON WALKER, B.A., M.B.,  
 DAVID JAMES GIBB WISHART, B.A., M.D., C.M.,  
 THE LIBRARIAN OF THE UNIVERSITY.

*Secretary*.....ALEXANDER PRIMROSE, M.B., C.M.  
*Assistant Secretary*.....E. STANLEY RYERSON, M.D., C.M.

\* Lecturers and instructors as indicated by the asterisk shall act as Assessors only and shall not be entitled to vote.



**OFFICERS AND MEMBERS OF THE FACULTY SINCE ITS ORIGIN****Deans.**

W. T. Aikins, 1887-1893.  
 U. Ogden, 1893-1896.  
 R. A. Reeve, 1896-1908.  
 C. K. Clarke, 1908-

**Secretaries.**

Adam Wright, 1887-1893.  
 James Brebner, 1893-1894.  
 A. Primrose, 1894-

**Assistant Secretaries.**

J. J. Mackenzie, 1900-1908.  
 E. Stanley Ryerson, 1908-

**Chair of Medicine and Clinical Medicine.***Professors of Medicine.*

H. H. Wright, 1887-1892.                      A. McPhedran, 1900-  
 J. E. Graham, 1887-1900.

*Professors of Clinical Medicine.*

A. McPhedran, 1900-                      J. L. Davison, 1903-1909.

*Associate Professors of Medicine and Clinical Medicine.*

A. McPhedran, 1892-1900.                      R. D. Rudolf, 1903-1908.  
 J. T. Fotheringham, 1903-

*Associate Professors of Clinical Medicine.*

W. P. Caven, 1896-1913.                      R. J. Dwyer, 1903-  
 W. B. Thistle, 1900-                      H. B. Anderson, 1903-  
 A. M. Baines, 1903-                      Graham Chambers, 1908-  
 A. R. Gordon, 1903-                      William Goldie, 1913-

*Associate Professors of Paediatrics.*

A. M. Baines, 1903-                      H. T. Machell, 1903-

**Chair of Surgery and Clinical Surgery.***Professor of Surgery.*

W. T. Aikins, 1887-1897.

*Professors of Surgery and Clinical Surgery.*

I. H. Cameron, 1897-	G. A. Peters, 1903-1907.
F. LeM. Grasett, 1903-1909.	L. Teskey, 1903-1909.

*Associate Professor of Surgery and Clinical Surgery.*

G. A. Peters, 1892-1903.

*Professor of Surgery and Surgical Pathology.*

I. H. Cameron, 1887-1892.

*Associate Professor of Clinical Surgery and Clinical Anatomy.*

G. A. Bingham, 1903-

*Professors of Clinical Surgery.*

L. McFarlane, 1887-1896.	I. H. Cameron, 1892-1896.
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*Associate Professors of Clinical Surgery.*

A. Primrose, 1897-	F. N. G. Starr, 1900-
B. Spencer, 1897-1903.	C. L. Starr, 1903-
L. M. Sweetnam, 1897-1902.	(In charge of Orthopaedics).
H. A. Bruce, 1897-	P. W. H. McKeown, 1908-
W. Oldright, 1899-1910.	

**Chair of Obstetrics.**

*Professor.*

A. H. Wright, 1887-1912.

*Associate Professors.*

H. T. Machell, 1900-	K. C. McIlwraith, 1910-
F. Fenton, 1913-1913.	

**Chair of Gynaecology.**

*Professors.*

Uzziel Ogden, 1887-1903.	James F. W. Ross, 1903-1911.
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*Associate Professor.*

James F. W. Ross, 1897-1903.

*Professor of Operative Obstetrics and Gynaecology.*

J. A. Temple, 1903-1909.

**Chair of Obstetrics and Gynaecology.***Professor.*

B. P. Watson, 1912-

*Associate Professor of Gynaecology.*

F. W. Marlow, 1913-

**Chair of Anatomy.***Professors.*

J. H. Richardson, 1887-1896.

J. Playfair McMurrich, 1907

A. Primrose, 1896-1907.

*Associate Professors.*

M. H. Aikins, 1887-1896.

H. W. Aikins, 1896-

A. Primrose, 1892-1896.

**Chair of Chemistry.***Professors.*

W. H. Ellis, 1887-

W. R. Lang, 1900-

W. H. Pike, 1888-1900.

*Associate Professors.*

W. L. Miller, 1901-

F. B. Kenrick, 1910-

F. B. Allan, 1907-

*Associate Professor of Medical Chemistry.*

W. T. Stuart, 1903-1910.

**Chair of Biology and Physiology.***Professor.*

R. Ramsay Wright, 1887-1892.

**Chair of Biology.***Professor.*

R. Ramsay Wright, 1892-1912.

*Associate Professors.*

B. A. Bensley, 1906-

W. H. Piersol, 1910-

E. M. Walker, 1913-

**Chair of Physiology.***Professors.*

A. B. Macallum, 1890-1904.

T. G. Brodie, 1909-

*Professor of Physiology and Physiological Chemistry.*

A. B. Macallum, 1904-1909.

**Chair of Biochemistry.**

*Professor.*

A. B. Macallum, 1909-

**Chair of Pharmacology and Therapeutics.**

*Professors.*

James Thorburn, M.D., Edin., 1887-1892.

James M. MacCallum, 1892-1908.

*Associate Professor.*

C. F. Heebner, 1900-1903.

*Associate Professor of Pharmacy and Pharmacology.*

V. E. Henderson, 1909-

**Chair of Therapeutics.**

*Professor.*

R. D. Rudolf, 1908-

**Chair of Ophthalmology, Otology, Laryngology and Rhinology.**

*Professor.*

R. A. Reeve, 1887-1903.

**Chair of Ophthalmology and Otology.**

*Professors.*

R. A. Reeve, 1903-

G. H. Burnham, 1903-

G. S. Ryerson, 1903-

*Associate Professors.*

G. H. Burnham, 1896-1903.

J. M. MacCallum, 1909-

Chas. Trow, 1905-1911.

**Chair of Oto-Laryngology.**

*Professor.*

G. R. McDonagh, 1903-

*Associate Professors.*

G. R. McDonagh, 1896-1903.  
Geoffrey Boyd, 1913-

D. J. Gibb Wishart, 1903-

**Chair of Hygiene and Sanitary Science.***Professors.*

Wm. Oldright, 1887-1910.

J. A. Amyot, 1910-

*Associate Professor.*

J. G. Fitzgerald, 1913-

**Chair of Toxicology.***Professor.*

W. H. Ellis, 1900-

*Associate Professor.*

W. H. Ellis, 1897-1900.

**Chair of Medical Jurisprudence.***Professors.*

W. W. Ogden, 1887-1892.  
Bertram Spencer, 1900-1903.

N. A. Powell, 1903-

*Associate Professor.*

Bertram Spencer, 1896-1900.

**Chair of Medical Psychology.***Extra-mural Professors.*

Daniel Clark, 1887-1903.  
N. H. Beemer, 1900-

J. C. Mitchell, 1903-1906.

*Professor.*

C. K. Clarke, 1906-

*Associate Professor.*

Ernest Jones, 1912-1913.

**Chair of Physics.***Professors.*

James Loudon, 1887-1907.

J. C. McLennan, 1907-



*Associate Professor.*

J. C. McLennan, 1905-1907.

E. F. Burton, 1911-

**Chair of Pathology.**

*Professor.*

John Caven, 1892-1896.

**Chair of Pathology and Bacteriology.**

*Professors.*

John Caven, 1896-1900.

J. J. Mackenzie, 1900-

*Associate Professor.*

J. A. Amyot, 1900-1910.

*Professor of Clinical Pathology.*

H. B. Anderson, 1903-1905.

**Chair of Preventive Medicine.**

*Professor.*

Charles Sheard, 1903-1911.

**Chair of Pathological Chemistry.**

*Professor.*

I. B. Leathes, 1909-

### INFORMATION FOR STUDENTS IN MEDICINE.

1. The twenty-eighth session since the re-establishment of the Faculty of Medicine of the University of Toronto will commence on Tuesday, the 29th of September, 1914.

2. The Degrees in Medicine are Bachelor of Medicine (M.B.), and Doctor of Medicine (M.D.).

### BACHELOR OF MEDICINE.

3. Candidates for the degree of Bachelor of Medicine are required to matriculate and to attend during five sessions of at least eight months each the courses of instruction presented, and to pass five examinations taken in the following order: The First at the end of the first session; the Second at the end of the second session; the Third at the end of the third session; the Fourth at the end of the fourth session; and the Fifth at the end of the fifth session.

### ENTRANCE.

4. Candidates for the degree must pass the Matriculation examinations unless (1) they possess a degree in Arts, not being an Honorary Degree, from any Dominion or British University; or (2) have already matriculated in the Faculty of Arts or in the Faculty of Law in this University.

5. Students are required to complete matriculation before being admitted to the course in Medicine.

6. No fee will be charged for transferring from the Faculty of Arts to that of Medicine.

### REGISTRATION.

7. Students entering the University are required to submit the certificates, on which they claim standing, to the Registrar of the University before being permitted formal registration with the Secretary of the Faculty.

8. Registration for Clinical classes begins on September 29th and under no circumstances will any student be signed up before that date. Registration will not be accepted by letter, neither is one student permitted to sign for another, but each must register in person.

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*It should be understood that the programme and regulations regarding courses of study and examinations contained in this Calendar, hold good for this calendar year only, and that the Faculty of Medicine, while fully sensible of its obligations towards the students, does not hold itself bound to adhere absolutely, for the whole five years of a student's course, to the conditions here laid down.*

9. No student shall be allowed to register in the Faculty of Medicine after the fifteenth day of October of any year, and must be in actual attendance from the date of registration and no student shall be admitted to any laboratory or clinical course after that date, except at the discretion of the instructor concerned. Any student desirous of repeating any year more than once must obtain the permission of the Faculty Council before being allowed to do so.

10. Regular attendance in all the courses of the year shall be required as well as a satisfactory repetition of the work of each course from any student who may be repeating his year.

11. Candidates who have been conditioned in one or more subjects at the Annual examinations and again fail in the subjects at the Supplemental examinations in the autumn, and who are thereby prevented from registering in the next succeeding year, shall be required to repeat the subject or subjects in which they have been conditioned before they can again present themselves for examination. Such students may attend the courses in the other subjects of that year.

12. *A student who has attended the course of instruction in any year will be required to complete the examinations for that year before he will be permitted to register in the succeeding year.*

### ATTENDANCE.

13. Candidates are required to attend lectures and receive practical instruction during each of the five years at this University.

14. The Senate may accept certificates of attendance at the lectures and practical instruction in the laboratories of affiliated and other recognised institutions.

15. A student who fails to do satisfactory term work in any subject is not permitted to present himself for examination, either theoretical or practical, until he is able to present satisfactory certificates of term work completed. A student who for any reason may be required to repeat his year, must repeat his attendance at all the courses of the year and must produce evidence of having satisfactorily repeated the work of each course.

16. In cases of students applying for temporary positions in hospitals or for *locum tenens* to physicians the permission of the Faculty Council must be obtained before they will be allowed to absent themselves from the lectures and laboratory work of the University.

### FEES FOR INSTRUCTION.

#### Regular Students in Medicine.

17. All University fees are payable to the Bursar, at his office in the Main University Building, between the hours of ten and one o'clock, except on Saturday.

18. *Regular Students.* First, Second, Third, Fourth and Fifth Years—  
Annual Fee, including tuition, library, laboratory supply, hospital\*  
and one annual examination:—

If paid in full on or before November 10th..... \$150.00

By instalments:—

First instalment, if paid on or before November 10th..... \$75.00

Second instalment, if paid on or before February 10th..... 80.00

19. *Combined Courses in Arts and Medicine.*

Annual Fee, including college registration, library, laboratory supply,  
and one annual examination:

	Arts Fees.	Medical Fees.	Total.
First Year Arts.....	\$58.00		\$58.00
Second Year Arts.....	58.00		58.00
Third Year Arts and First Year Medicine.....	59.00	\$85.00	144.00
Fourth Year Arts and Second Year Medicine....	62.00	85.00	147.00

The fees for the Third, Fourth and Fifth Years in the Faculty of Medicine  
are as for regular students.

Payment of the Medical portion of the fees:—

If paid on or before November 10th.....\$85.00

By instalments:—

First instalment, if paid on or before November 10th..... 45.00

Second instalment, if paid on or before February 10th..... 45.00

20. *Repeating the Year.*

If paid in full on or before November 10th..... 50.00

21. The following fees for *Occasional and Post-Graduate Students* have  
been instituted:—

(1) That candidates for a higher degree in Medicine, or graduates con-  
ducting research work, be required to register and pay a fee of \$5.00.

(2) That graduates or undergraduates wishing to repeat any under-  
graduate course in Medicine be charged \$20.00 per course.

(3) Students in Dentistry taking a course in Anatomy will be required to  
pay a fee of \$20.00.

(4) Students who are required to take the Summer Course of two  
months in one of the Clinical subjects, will be charged a fee of \$20.00 per  
course; those taking three or more courses will be charged \$50.00.

22. All of the above fees are payable in advance. After November 10th,  
a penalty of \$1.00 per month will be imposed until the whole amount is paid.  
In the case of payment by instalments the same rule as to penalty will  
apply. A student will not be admitted to any of the University lectures  
or laboratories who is in arrears for his fees.

\* The composite fee of \$150 includes one session's clinical facilities  
at the Toronto General Hospital, St. Michael's Hospital, and the Hospital  
for Sick Children, but does not cover the midwifery ticket for the Burnside  
Lying-in Hospital, which must be obtained there.

23. *General Fees.*

Matriculation, or registration of Matriculation.....	\$5.00
Supplemental examinations.....	10.00
Admission <i>ad eundem statum</i> .....	10.00
Degree of M.B.....	20.00
Degree of M.D.....	20.00
Admission <i>ad eundem gradum</i> .....	20.00

In the case of candidates for the Final Examinations, the fee for the degree must be paid to the Bursar not later than the 20th March.

**STUDENTS' COUNCIL FEE.**

The Annual Fee.....	\$1.00
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Every male student in attendance, proceeding to the Degree of Bachelor of Medicine, is required to pay to the Bursar at the time of the entry of his name with the Secretary, the annual fee of one dollar for the maintenance of the Council of the Undergraduates.

**INSTRUCTION.**

24. The course of instruction given by the Faculty of Medicine consists of five sessions of eight months each, preparing students for the degree of M.B. and for becoming general practitioners of Medicine.

25. The course is so framed that the requirements of the various Provincial Licensing bodies are fulfilled and it aims at giving the student such a training in the sciences as is now exacted of all those who desire to obtain any British Medical qualification in addition to a Canadian one.

26. During the early years an effort is made to give the student a scientific foundation for the work which he takes up in the latter part of his course. In each of the scientific departments, however, the fact that the student is about to become a general practitioner is particularly kept in view, and the student's work in the primary subjects is but a means towards an end.

27. In the First Year, instruction in the subjects of Chemistry (Organic and Inorganic), Physics, Biology, Mammalian Anatomy and Embryology is given by both laboratory and didactic methods. In Anatomy, the subdivisions of Osteology and Arthrology are taught. Histology is also begun in this year.

28. In the Second Year, the major part of the subjects of Anatomy, Physiology and Biochemistry is presented to the student; the subject of Histology is completed; and a course in Bacteriology is given.

29. During the Third Year an attempt is made to bridge the gap which so commonly exists between the primary scientific and the final clinical subjects, by taking up Anatomy and Physiology at the same time as Surgery and Medicine throughout the year. Preliminary courses in Pathology and Pathological Chemistry are given during the Easter term. Instruc-



tion is also given in Pharmacology. A series of ten lectures upon Psychology is delivered in this year. Particular attention is paid during this year to teaching the student the methods of physical examination of both Medical and Surgical cases.

30. In the Fourth Year, the student devotes all his morning and one afternoon a week to clinical work at the various Hospitals. He spends the remainder of his afternoons at didactic lectures and at laboratory work in Pathological Histology and Gross Pathology. The clinical instruction is so directed as to prepare the student to undertake the complete physical examination of any patient, the greater part of his time being occupied with Medical and Surgical cases. In this year the student is introduced to the subjects of Obstetrics, Gynaecology, and the specialties of the Eye, Ear, Nose and Throat. Several weeks are spent in the study of Paediatrics and Orthopaedic Surgery at the Hospital for Sick Children. Lectures are also delivered during the year in Special Pathology, Therapeutics, Surgical Anatomy, Medical Jurisprudence, Toxicology and Hygiene.

31. During the Fifth Year the student devotes one period of ten weeks to Clinical Medicine (including Paediatrics and the study of Tuberculosis); one of ten weeks to Surgery (including Orthopaedics) and Surgical Pathology; and one to Clinical Therapeutics, Obstetrics, Gynaecology, Ophthalmology, Oto-laryngology, Dermatology, Infectious Diseases, Neurology and Psychiatry. Those students whose work and standing justify it, will be given special advanced courses of laboratory work in Pathology and Pathological Chemistry or some special instruction in one of the clinical departments. Clinical lectures in Medicine, Surgery and special subjects, Pathological Conferences, and short courses of lectures on Anaesthesia, Dentistry, Medical Ethics, History of Medicine, and Life Insurance are also given in the Fifth Year.

## **ELECTIVES.**

### **Fifth Year.**

32. Students whose work and standing in the opinion of the Heads of the Departments of Medicine, Surgery, Pathology, Pathological Chemistry and Obstetrics and Gynaecology justify it, will be permitted to devote three afternoons a week to special advanced courses of laboratory work (not research) arranged for them by the Departments of Pathology and Pathological Chemistry, and to the study of some special clinical subject, facilities for which can be offered by the Head of the clinical department concerned.

On these afternoons, those students who are not admitted to elective courses will go on with routine clinical work in Medicine and Surgery. Those students who are weak in any particular subject may be required to take special work in this subject at this time.

One such laboratory course of sixty hours and the study of one special clinical subject is required of all candidates for Honours in the subjects of Groups I, II, and III, and two such laboratory courses of sixty hours each of all candidates for Honours in Group IV.

The subjects specially recommended for Electives are:—

- (1) Serum Diagnosis and Immunology.
- (2) Experimental Pathology.
- (3) Pathological Chemistry.
- (4) Medicine.
- (5) Surgery, including Anatomy.
- (6) Obstetrics and Gynaecology.

Any student wishing to do Elective work in the above or any other subject or department, must file an application at the Secretary's office not later than September 15th.

### SUMMER COURSES IN CLINICAL SUBJECTS.

33. For students only who have been conditioned in Clinical subjects, summer courses in the following subjects will be given during the two months immediately preceding the Supplemental Examinations in September:

- Clinical Medicine,
- “ Surgery,
- “ Obstetrics,
- “ Gynaecology,
- “ Ophthalmology,
- “ Oto-laryngology,
- “ Psychiatry.

These Courses will be taught at the Toronto General Hospital, St. Michael's Hospital and the Hospital for Sick Children.

(For information regarding fees for these Courses, see page 33.)

### SCIENCE COURSES FOR STUDENTS IN MEDICINE.

34. The special attention of students about to enter the undergraduate course in Medicine is directed to the new Science curricula in arts, providing two Special Courses adapted particularly as preparatory to the instruction given in the final years in Medicine. These courses are:—(1) The Biological and Physical Sciences Course and (2) The Physiological and Bio-Chemical Course. A student who proceeds to the degree of B.A., by either of these courses, may, immediately after graduation, enter the Third Year in Medicine, but after completing the Fifth Year of the Medical Course, present himself for the degree of Bachelor of Medicine. It is thus possible for a student to obtain the degrees of Bachelor of Arts and Bachelor of Medicine after seven years' study at the University.

35. In the curricula of the two Arts Courses the Science subjects are treated much more extensively than they are in the Medical curriculum and in either course along one of two lines. In the Biological and Physical Sciences Course emphasis is laid on the structural and developmental features of animal life and on oecology and parasitology. In the Physiological and Biochemical Course special attention is given to the functional, chemical and other phenomena of living matter.

36. The Biological and Physical Sciences Course completes the requirements of the First two years in Medicine with the exception of Bacteriology of the Second Year. The course in Physiology and Biochemistry completes the requirements of the curriculum of the first three years in Medicine as to Primary subjects, with the exception of Bacteriology of the Second Year.

37. These courses not only afford opportunities for a broader training and greater scientific attainment than is possible in the more limited five years' course in Medicine, but they fit the student for a much wider field of usefulness after graduation. The graduate who has taken one of the Science Courses in Arts and subsequently the Course in Medicine is qualified to devote his life to one of the purely scientific lines of Medicine, if he should so elect, after leaving the University, and, moreover, he is, undoubtedly, better fitted to practise his profession should he desire to prepare himself for that alone.

38. Students who proceed to the Arts degree through other Science Courses may, on entering the Faculty of Medicine, be allowed exemption from such subjects in Medicine as they have taken in the curricula of the Faculty of Arts.

### **SUMMER POST-GRADUATE COURSE.**

39. The Faculty of Medicine of the University of Toronto begs to announce that a Summer Post-Graduate Course will be given during the coming summer, beginning on Monday, June 1st, and continuing for a period of three weeks until Saturday, June 20th.

All clinics will be given at the Toronto General Hospital unless otherwise stated.

The Post-Graduate Course is open to graduates in Medicine in good standing.

Intending candidates should first register by letter or in person with the Secretary of the Faculty of Medicine by May 25th.

The fee for the Course, including registration, is \$30.00, payable in advance at the office of the Bursar of the University of Toronto. Receipts for fees paid and registration cards must in all cases be shown to the Hospital Superintendent, on the occasion of the first demonstration at the hospital. The daily out-patient clinics in the various departments, and surgical operations, are open to those attending the course.

Special advanced work in any department may be arranged for through the Secretary, if a sufficient number apply.

Special short courses will be arranged in Pathology, Surgical Anatomy and Clinical Laboratory Methods, and a special fee of \$10.00 will be charged for each course.

### EXAMINATIONS.

40. The annual examinations are styled the First, Second, Third, Fourth and Fifth examinations, and are to be passed at the end of the First, Second, Third, Fourth and Fifth academic years respectively.

41. The Annual examinations are held in May, and the Supplemental examinations in September. Candidates who have been conditioned in one or more subjects at the annual examinations and again fail in the subjects at the Supplemental examinations in the autumn, shall be required to repeat the subject or subjects in which they have been conditioned before they can again present themselves for examination. Such students may attend the courses in the other subjects of that year.

42. A minimum of fifty per cent. in each subject is required to pass, and seventy-five per cent. for honours. Candidates at the First and Second examinations who have passed in the majority of the subjects required, and candidates of the Third, Fourth and Fifth Years who have passed in all but three subjects, may present themselves at the Supplemental examinations next ensuing, in the subjects in which they failed (provided they have complied with the regulations respecting clinical work) and on passing at such examinations, shall be allowed their year.

43. A candidate who has failed to pass in the required number of the subjects at one annual examination, and has either not presented himself or has failed to pass in all subjects in the next ensuing supplemental examination, must repeat his attendance at all courses of the year and must produce evidence of having satisfactorily repeated the work of each course, before he will be allowed to again present himself for examination.

44. A candidate failing in Medicine, Surgery or other Clinical subject shall be required to take a course of instruction of two months in the subject or subjects in which he has failed, at a Hospital approved by the Faculty, at which clinical instruction is given, before being again admitted to examination. A candidate will also be required to present a report to the Secretary that the work done is satisfactory to the Head of the Department concerned. Students must ascertain from the Secretary whether the Hospital at which they propose to take such a summer course is approved by the Faculty.

45. Undergraduates below the standing of the Fifth Year, who have been rejected or who have been prevented from attending the annual examinations, by sickness, domestic affliction, or other causes beyond their control, may present themselves for examinations at the Supplemental examinations in September.



46. Candidates who failed to attend at the annual examinations must prove to the satisfaction of the President before presenting themselves in September, the existence and sufficiency of the alleged cause of absence.

47. Undergraduates of the Fifth Year who have failed in not more than three subjects may present themselves for examination in the said subjects at the Supplemental examinations in September.

48. In the case of Graduates or Undergraduates in Natural Sciences or Biology, certificates of attendance on the second course of Practical Anatomy and on the second course of fifty lectures on Anatomy may be presented with the certificates of attendance on the lectures of the Third Year.

49. No application from a student for aegrotat standing shall be entertained unless he has gained 50% of the laboratory or term marks in all departments of his course, or has been granted exemption from the same. Except under unusual conditions a special examination of the candidate shall be held. Such examination, if possible, must be held previous to the final meeting of the Board of Examiners.

### ADMISSION TO EXAMINATIONS.

50. A candidate will not be admitted to an examination unless he has paid all the fees due from him.

51. A candidate who sends his application for examination after the day appointed for the receipt of such application must pay an additional fee of one dollar.

52. No candidate in a course involving practical work in a laboratory will be admitted to examination if the Professor under whom his work is carried on reports in writing to the Secretary that he has not done satisfactory laboratory or clinical work or has signally failed in the practical examinations. No candidate in the First Year shall be permitted to present himself at the annual examinations until a report that he has obtained satisfactory standing in his laboratory work and in term examinations is presented to the Secretary's Office by the Heads of the Departments of Biology, Chemistry and Physics.

53. Every undergraduate who proposes to present himself at an examination must send to the Secretary a statement (according to a printed form which will be furnished) of the course he is taking, whether he intends to compete for Honours, and such other particulars as the printed form may indicate, together with the original certificates referred to in this statement. At the Fifth examination, the candidate is required to submit the following certificates:—

- (1) Of having conducted at least six labours.
- (2) Of proficiency in vaccination.
- (3) Of having attended twelve autopsies.

Students of the Fifth Year shall only be eligible to take off their required number of Obstetrical cases in the hospitals during the time that they are attending Obstetrical clinics.



54. The work in the laboratories and in the wards of the hospitals during the session is an essential part of the instruction and will be considered in determining standing at any examination.

55. Before admission to examination the candidate is required to submit evidence of having complied with the regulations respecting attendance upon didactic, laboratory, and clinical work in each of the subjects of instruction for the year in which he seeks examination. A certificate is issued by the University, and must be signed by the head or heads of each department of instruction.

**EQUIVALENT HONOUR COURSES AND EXAMINATIONS.**

56. The following Honour courses of instruction and examination in the Faculty of Arts are accepted in the place of courses of instruction and examinations in the Faculty of Medicine, subject to possible amendment during the present session, according to the subjoined scheme.

**Faculty of Arts.****Faculty of Medicine.**

- |  |                   |  |
|--|-------------------|--|
| 1. First Year *Biology,  | equivalent to     | First Year Biology.                            |
| 2. First Year General Course<br>*Physics,  | } equivalent to { | First Year Physics.                            |
|  |                   |  |
| 3. First and Second Years<br>Physics of the courses in<br>Mathematics and Physics<br>and in Natural & Physical Sciences, | } equivalent to { | First Year Physics.                            |
|  |                   |  |
| 4. Mammalian Anatomy of<br>Second Year Biological<br>and Physical Sciences<br>and Third Year Biology                     | } equivalent to { | First Year Mammalian Anatomy.                  |
|  |                   |  |
| 5. Histology and Cytology<br>of courses in Third Year<br>Biological and Physical<br>Sciences,                            | } equivalent to { | Histology of First and Second Years.           |
|  |                   |  |
| 6. Embryology of Third and<br>Fourth Years of courses<br>in Biological and Physical<br>Sciences and Biology              | } equivalent to { | Embryology of First Year.                      |
|  |                   |  |
| 7. Physiology and Biochemistry<br>of Third and Fourth Years of course<br>in Biological and Physical<br>Sciences,         | } equivalent to { | Physiology and Biochemistry<br>of Second Year. |
|  |                   |  |
| 8. Chemistry of First and<br>Second Years of courses<br>in Biological and Physical<br>Sciences,                          | } equivalent to { | Chemistry of First Year                        |
|  |                   |  |

\* (Provided 50% has been obtained in the examination.)

- |  |                   |  |
|--|-------------------|--|
| 9. Anatomy of Third and Fourth Years of course in Biological and Physical Sciences,  | } equivalent to { | Anatomy of First and Second Years.                         |
|  |                   |  |
| 10. Anatomy of the Second and Third Years of the Physiological and Biochemical Course,   | } equivalent to { | Anatomy of First and Second Years.                         |
|  |                   |  |
| 11. Physiology and Biochemistry of the Third Year in the Physiological and Biochemical Course,   | } equivalent to { | Physiology and Biochemistry of Second Year.                |
|  |                   |  |
| 12. Physiology and Biochemistry of the Third and Fourth Years of the Physiological and Biochemical courses, including Physiological Neurology, | } equivalent to { | Physiology and Biochemistry of the Second and Third Years. |
|  |                   |  |
| 13. First and Second Class Honours in the Physiological and Biochemical course,  | } equivalent to { | Honours in Physiology and Biochemistry.                    |
|  |                   |  |

*No applications or petitions for exemptions from classes, laboratory work or examinations will be received or considered unless filed at the Secretary's office on or before October 15th of any year.*

### EQUIVALENT EXAMINATIONS.

57. Courses of lectures and examinations in the Faculty of Arts are accepted in the place of courses of lectures and examinations in the Faculty of Medicine, according to the following scheme:—

#### Faculty of Arts.

1. The instruction and examinations of the Third Year in the Physiological and Biochemical course,

#### Faculty of Medicine.

- } equivalent to {  
The course and examinations in the Second Year except in Bacteriology.

- |   |                 |   |
|---|-----------------|---|
| 2. The instruction and examinations in the Fourth Year of the Physiological and Biochemical course,                                       | } equivalent to | { The course and examinations of the Primary Subjects in Medicine except in Bacteriology. |
| 3. The instruction and examinations in Physiology and Biochemistry of the Third and Fourth Years in the Biological and Physical Sciences, | } equivalent to | { The course and examinations in Physiology and Biochemistry of the Second Year.          |
| 4. The instruction and examinations of the Fourth Year of the course in Biological and Physical Sciences,                                 | } equivalent to | { The course and examinations in the Second Year, except Bacteriology.                    |

58. Candidates who desire to compete for scholarships and medals are required to submit to the annual examination in all the subjects of each examination, though otherwise entitled to partial exemption according to the preceding scheme; and candidates not competing for scholarships or medals, who are entitled to exemption according to the preceding scheme, will rank in Honours in these subjects.

## SUBJECTS OF THE DIFFERENT EXAMINATIONS.

### 59. FIRST EXAMINATION.

1. Biology.
2. Chemistry.
3. Physics.

NOTE.—The standing of the students in the subjects of Mammalian Anatomy, Embryology, Histology and Anatomy shall be determined by the term marks.

60. SECOND EXAMINATION.

1. Anatomy.
2. Physiology.
3. Biochemistry.
4. Histology.
5. Bacteriology.

61. THIRD EXAMINATION.

1. Anatomy.
2. Physiology.
3. Pharmacology.
4. Clinical Medicine.
5. Clinical Surgery.
6. Pathology.
7. Pathological Chemistry.

NOTE.—The oral examination in General Anatomy will be held at the end of the Michaelmas term.

62. FOURTH EXAMINATION.

1. Medicine and Clinical Medicine.
2. Surgery and Clinical Surgery.
3. Pathology and Practical Pathology.
4. Obstetrics.
5. Gynaecology.
6. Hygiene and Preventive Medicine.
7. Medical Jurisprudence and Toxicology.
8. Topographical Anatomy.
9. Pathological Chemistry.

63. FIFTH EXAMINATION.

1. Medicine and Clinical Medicine.
2. Surgery and Clinical Surgery.
3. Pathology and Practical Pathology
4. Clinical Obstetrics.
5. Clinical Gynaecology.
6. Clinical Ophthalmology, Clinical Oto-Laryngology.
7. Therapeutics.
8. Paediatrics.
9. Pathological Chemistry.
10. Clinical Psychiatry.

The final standing of students in Ophthalmology, Oto-Laryngology, Gynaecology, and Psychiatry shall be determined by an examination at the end of the trimester in which the students have received their instruction in these subjects, but a student may postpone his examination until the end of the session.



**EXAMINATIONS FOR HONOURS.**

64. Honour standing will be granted, under conditions defined below, in

(1) Anatomy, Physiology, Biochemistry or Pharmacology at the end of the Third Year, and in the following groups of subjects at the end of the final year:

Group 1. Medicine,  
Pathology,  
Pathological Chemistry

Group 2. Surgery,  
Pathology.

Group 3. Obstetrics and Gynaecology,  
Pathology.

Group 4. Pathology,  
Pathological Chemistry,  
Clinical Medicine.

Only those students who obtained Honours in the Third Year in Physiology and Biochemistry or graduates in Arts in the Physiological and Biochemical Course who obtained first or second class Honours may compete for Honours in Group 4.

(2) Honour papers shall be set or Honour examinations held in addition to, and of a more difficult character than, those given to pass students.

(3) No student shall be allowed to compete for Honour in the Fifth Year in more than one of the above groups of subjects.

(4) Students must select the group in which they wish to compete for Honours and apply through the Secretary for admission to the necessary Elective Courses not later than the 15th of September, immediately preceding the commencement of their Fifth Year. Their applications will be considered by a Committee composed of the Heads of the Departments of Medicine, Surgery, Obstetrics, Pathology and Pathological Chemistry, and on registration they will be notified of the results.

(5) Honours shall be of one class only. To obtain Honours in a subject in the Third Year or in a group of subjects in the Fifth Year a candidate must obtain 75% of the marks in both the Honour and Pass Examinations and term work in the final year for that subject or for each of the subjects of that group. He will also be required to pass at the same time in all the other subjects of the year.

(6) Candidates for Honours in Groups 1, 2 or 3 must take in the Fifth Year one Special Elective Course in Pathology or Pathological Chemistry and one Special Course of clinical instruction. (See Electives, page 35)

(7) Candidates for Honours in Group 4 must take two Special Elective Courses in Pathology or Pathological Chemistry.

(8) In the graduating list the names of those students who have obtained Honours will appear, with a statement indicating the subjects or group of subjects in which those Honours were obtained.

### **SPECIAL PROFICIENCY IN PASS EXAMINATIONS.**

65. In the results of the pass examinations of each year a list of those students who obtain an average of 75% in all subjects of the year and not less than 60% in any subject shall be published as having shown Special Proficiency.

The names of those students who have shown such Special Proficiency in all the five years of the course shall in the graduating list be marked so as to indicate the fact that they have graduated with Special Proficiency.

### **ADMISSION AD EUNDEM STATUM.**

66. Undergraduates of other universities applying for admission *ad eundem statum* must present certificates of having passed the examinations in the various subjects of this curriculum preliminary to the examination for which they desire to present themselves.

### **Application for Equivalent Standing.**

67. Any student of another university who desires to be admitted to the Faculty of Medicine of this University with equivalent standing is requested to send his application to the Secretary of the Medical Faculty together with:—

1st. A Calendar of the university in which he has studied, giving a full statement of the courses of study.

2nd. A complete statement of the course he has followed.

3rd. A certificate of the standing gained, and of conduct. These will be submitted to the Faculty, who will decide what examinations may be necessary before admitting the candidate.

### **DOCTOR OF MEDICINE.**

68. A Bachelor of Medicine will be eligible for the Degree of M.D. on the following conditions:

(1) At least one year must elapse between the date of conferring the degree of M.B. and that of conferring the degree of M.D.

(2) He must present an approved thesis embodying the results of an original research conducted by the candidates in any department of Medicine.

(3) The subject of the thesis must be submitted to the Registrar for the approval of the Board of Post-Graduate Studies at least five months before the degree is conferred.

(4) The degree may be conferred at any regular meeting of the Senate.

**ADMISSION AD EUNDEM GRADUM.**

69. A graduate of any of the universities in Great Britain or Ireland, if his degree be not an honorary one, may be admitted to the like degree in the University of Toronto. He must send in his certificate to the Registrar at least two weeks before the first meeting of the session of the Senate at which his application is to be brought forward.

**MEDALS, SCHOLARSHIPS AND FELLOWSHIPS.****Medals.**

70. The Faculty offers a gold medal and three silver medals annually for competition among those students of the Medical Faculty who are candidates for the degree of M.B., which will be awarded by the Senate on the recommendation of the examiners.

**Undergraduate Scholarships.**

71. The following scholarships are annually offered for competition amongst students who attend the Lectures of the University Medical Faculty:—

At First Examination.....	one of \$50
At First Examination.....	one of \$30
At Second Examination.....	one of \$50
At Second Examination.....	one of \$30

72. Every student taking a scholarship is required to sign a declaration that it is his intention to pursue his medical studies for three or four years, according to the year in which he has taken such scholarship, and to proceed to a degree in the University of Toronto, and that he is not an undergraduate or graduate in the Faculty of Medicine of any other university.

73. No scholarship will be awarded to any candidate who has not obtained honours in the examination for which it is conferred.

74. Each scholarship is tenable for one year only, but a scholar of one year is eligible for the scholarship of a succeeding year.

75. The scholarships or medals are not open to those who are at the same time undergraduates or graduates in Medicine of another university.

76. No undergraduate in the Honour course, who shall have degraded into a lower year, shall be permitted at any ensuing examination to compete for medals or scholarships, except by special permission of the Faculty to be granted only in case of illness or for other grave reasons.

**The George Brown Memorial Scholarship in Medical Science.**

77. Dr. A. H. F. Barbour, of Edinburgh, having placed a sum of money at the disposal of the University of Toronto, for the purpose of founding a Scholarship in Medical Science in memory of the late Hon. George Brown, the following regulations have been adopted with regard thereto:

This scholarship shall be called the George Brown Memorial Scholarship in Medical Science and shall be awarded annually at the Convocation for conferring degrees in Medicine to the Bachelor of Medicine who shall have distinguished himself most in the subjects of Anatomy Biology, Physiology, Biochemistry, Pharmacology, Pathology and Pathological Chemistry.

The award shall be made by a committee composed of the Professors in these subjects who shall report as to the successful candidates, after having given due attention to the results of the annual examinations, and to the character of the work done by the candidates in the University laboratories.

The holder of the scholarship during the year of tenure is required to engage in original research in any one of the laboratories of the University on some subject bearing on the advancement of medical science—the laboratory providing the material for the investigation.

The scholarship is to be paid in two portions, two-thirds at the time of award and one-third six months later, on the holder giving satisfactory report (to whomsoever the University may appoint) of the work he has already done.

A report of the research, when completed, is to be given to the University.

The value of the scholarship consists in the proceeds of one thousand pounds sterling, invested at the rate of interest secured by the University for such benefactions.

### **The Starr Medals.**

78. The late Richard Noble Starr, M.D., devised certain property for the encouragement of post-graduate study in Anatomy, Physiology and Pathology, and in fulfilment of this object one gold and two silver medals called the "Starr Medals", are awarded annually to three candidates for the degree of M.D., who have shown by the theses which they have presented for that degree, that they have successfully pursued such study in any one of these subjects. The theses for which these medals are given must attain a standard approved of by the Board of Examiners, and the relative value of the theses will determine the rank of the candidates for the medals.

### **George Armstrong Peters' Scholarship.**

79. The Scholarship will be awarded biennially to a graduate student of the University of Toronto on the recommendation of the Department of Surgery.

The first award was made in 1912 and the holder of the Scholarship will be required to undertake work in one of the Departments of the University which will have some special bearing on Surgery.

This Scholarship will be available for any graduate who wishes to do special research work in connection with the Department of Surgery or in co-related subjects.



A graduate wishing to obtain the Scholarship must apply to the Department of Surgery and present his credentials, and the award will be made on the recommendation of the Department.

Present holder of the Scholarship, D. E. Robertson, M.B.

#### **A Prize.**

80. A portion of the fund of the Reeve Post-Graduate Scholarship will be devoted to establishing a prize of \$50.00, to be awarded annually for the best published report of work done in the laboratories by a research Fellow or junior member of the staff in any department in Medicine.

The award shall be made in September by a Committee composed of the Professors of Anatomy, Physiology, Biochemistry, Pharmacology, Pathology and Pathological Chemistry.

#### **Chappell Prize.**

81. Dr. Walter F. Chappell, of New York, a graduate in the Faculty of Medicine of the University of Toronto, has established a prize of Fifty Dollars (\$50.00) per annum to be awarded in alternate years to the best student of the final year in Clinical Medicine or Clinical Surgery. In June, 1914, the prize will be awarded in Clinical Surgery. This prize is awarded on recommendation of the Head of the Department.

#### **The James H. Richardson Research Fellowship in Anatomy.**

82. This Fellowship of the annual value of Five hundred dollars (\$500.00) has been established in memory of the late Dr. James H. Richardson, for many years Professor of Anatomy in the University of Toronto. It is open to graduates in Medicine of the University of Toronto and of such other Universities and Medical Schools as may be approved by the Nominating Committee and to students in the University of Toronto who shall have completed the third year of the course in Medicine.

The fellowship is awarded on the nomination of a Committee consisting of the Professor of Anatomy, the Professor of Biology and the Professor of Surgery in the University of Toronto, and the holder of it is obliged, during its tenure, to devote his entire time to investigation in Anatomy under the direction of the Professor of Anatomy in the University of Toronto. The fellowship is tenable for one year, but the holder of it is eligible for re-appointment for not more than two additional years, at the discretion of the University Senate upon the recommendation of the Nominating Committee.

Applications for nomination to the Fellowship should be handed to the Professor of Anatomy not later than the first day of May of each year.

Present holder of the Fellowship, H. P. Robinson, B.A., M.B.



### Research Medicine.

83. During the early part of the year, on request, a number of business men subscribed to a fund for the promotion of Clinical and Laboratory Research work in the Department of Medicine. The fund has already reached upwards of \$75,000.00; it is payable in five annual instalments.

The first aim is to establish one or more Fellowships annually, for the recent graduates. Each Fellowship is tenable for three years, and will be of the value of \$750 the first year. In the meantime, two or more Senior Research Fellows are to be appointed, whose duty it will be to aid the Fifth Year students in their work and stimulate them to higher aims.

There has also been appointed an Assistant in charge of special research work in Tuberculosis, etc.

It is also hoped to have a sufficient fund to defray expenses of any approved research work that may be offered.

Up to the present the following appointments have been made:

*Research Fellows*, Robert G. Armour, Alfred H. Caulfeild, Cyril Gray Imrie, Wm. Fletcher McPhedran, Noble C. Sharp, Keith M. B. Simon.

### RESIDENCE FOR MEN.

By the generosity of Mr. and Mrs. E. C. Whitney and other friends, the University can now offer to some hundred and fifty men the peculiar advantages of residential life and excellent accommodation within its own grounds. The Residence, opened in November, 1908, consists of three Houses situated on the north side of Hoskin Avenue, opening upon a quadrangle the fourth side of which is formed by Devonshire Place. They stand about two hundred yards to the north of University College and of the University Dining Hall and close to the University Gymnasium and Athletic Field. The buildings are known as the South, East and North Houses.

Each house contains twenty-four single rooms, one single suite, one double room and eleven suites, a suite comprising a study and two bedrooms. A large room in each building, with an open hearth and a library has been set aside as a common room. A lavatory with hot and cold shower baths is provided for every eight men. The buildings are heated by steam and lighted by electricity.

The University supplies the table, chairs, book-case, chiffonier, bed, mattress, pillows, linen and window shades for each room; it is prepared to furnish a drop-light for a nominal rental.

Each occupant is charged \$2.50 room-rent per week, payable to the Bursar four weeks in advance. The charge for each single suite is \$3.50 per week. These charges cover heat, light, house-service, house-laundry, and the use of the telephone. There is no separate dining hall connected with the Residence, but board may be obtained at the adjacent University Dining Hall for \$3.25 per week.

Applications for rooms must be made in writing to the Secretary of the Residence Committee (address the Registrar's Office) and must be accompanied by a deposit of \$5.00. This deposit will be returned if the application be not granted, and will be forfeited if a room is assigned to the applicant and not taken by him, unless notice of his refusal of the room be received by the Secretary in writing before September 8th. It will be returned in full at the end of the College year if the room key be given back and the room and furniture left in a satisfactory condition. The following principles govern the allotment of rooms: (i) No student, who as a result of the annual spring examinations is not assured of being able to proceed to the subsequent year, will be admitted into the Residence. (ii) The rooms in each House will be distributed proportionately between the various Faculties and Years. (iii) Rooms will be reserved for members of the incoming First Year until September 18th. (iv) Applications will be considered in order of priority.

The University lays down three general rules, designed to prevent hazing, the use of intoxicants and gambling. The students in each House shall elect a House Committee, which is entrusted by the University with the making and enforcing of any other needed rules and with the maintenance of order. A member of the Faculty resides in each House to act as friend and adviser to the men in residence.

### **CURRICULUM FOR THE DIPLOMA OF PUBLIC HEALTH.**

1. The University provides a Diploma in Public Health (D.P.H.) on the conditions hereinafter detailed.

2. Candidates for the Diploma must be graduates in Medicine of this University or of some other University recognized for this purpose by the Senate.

3. The curriculum leading to the Diploma shall extend over one Winter Session of eight months and one Summer Session of three months.

4. The Winter Session shall be devoted to Laboratory work in

*a.* Sanitary Chemistry.

*b.* Bacteriology.

*c.* Parasitology.

and to courses in

*d.* Advanced General Hygiene.

*e.* Advanced General Pathology, including Theory of Immunity and Comparative Pathology.

*f.* Elements of Geology, Meteorology and Climatology, in their relation to Public Health.

*g.* Sanitary Engineering.

*h.* Sanitary Legislation and Vital Statistics.

*i.* Clinics on Contagious Diseases.

*j.* History of Preventive Medicine and Epidemiology.

5. The Summer Session shall be devoted to a course of practical work in Public Health under the supervision of the Provincial Board of Health, including the methods of dealing with infectious diseases, inspection of schools and other public buildings, factories and dairies, inspection of water supplies and sewage disposal plants and other forms of municipal sanitation.

6. At the conclusion of the Winter Session an examination will be held on the subjects of the curriculum in Public Health specified in paragraph 4, the passing of which shall be a necessary preliminary to entering upon the practical course indicated in paragraph 6.

7. Candidates who have passed the examination and who present from the Provincial Board of Health a certificate of efficiency in the subjects specified in paragraph 6, will be granted the Diploma of Public Health.

8. The fees for the Course shall be \$150, payable in two instalments of \$75 each at the beginning of the Winter Session and the Summer Session respectively. The fee for the Diploma shall be \$20.

9. Up to and including 1907, graduates in Medicine who have acted as Medical Health Officers for a period of two years may present themselves for the examination referred to in paragraph 7 without preliminary attendance on the Courses of Instruction. For such candidates the fee for the Diploma shall be \$100.

**CURRICULUM IN DENTISTRY.  
DEGREE OF DOCTOR OF DENTAL SURGERY.**

**Matriculation.**

Candidates for the degree of Doctor of Dental Surgery must pass the Matriculation Examination hereinafter mentioned, unless:—

1. They possess a degree in Arts (not being an Honorary Degree), from some recognized University; or
2. Have already matriculated in the Faculty of Arts in this or some other University in Canada; or
3. Are Matriculants in the College of Physicians and Surgeons of Ontario; or
4. Have passed the Form III. or Form IV. Department Non-Professional examinations in which the Latin option has been taken, it being understood that the equivalent examinations under titles no longer in force will be accepted.

The regulations respecting the acceptance pro tanto of the certificates of other Provinces, as defined in the Curriculum for Junior Matriculation, are applicable to candidates in Dentistry.

5. Have passed an examination and received a certificate which is accepted by the General Medical Council of Great Britain for Registration as a student of Medicine or Dentistry.

Candidates not possessing any of the above-named qualifications will be required to pass the examination prescribed for matriculants in the Faculty of Arts in this University.

Candidates for the degree must matriculate before writing on any of the subjects prescribed for final examination.

**Undergraduates.**

1. Undergraduates (candidates for the final examination for the degree), matriculants in the Royal College of Dental Surgeons, an affiliated College of the University, and proceeding to graduation therefrom, must have complied with all the requirements prescribed from time to time, by the Board of Directors of the Royal College of Dental Surgeons of Ontario for admission to examination for a Certificate of License to practise Dentistry in Ontario, provided always that these requirements shall include attendance on at least four full courses of lectures, and laboratory and clinical instruction, embracing all the subjects of the curriculum, of not less than seven months each, except in the case of students who have already graduated in the Faculty of Arts (B.A. or M.A.), or the Faculty of Medicine (M.B. or M.D.), or the Faculty of Science (B.A.Sc. or B.Sc.), of a Canadian or other recognized University, who may complete the course in Dentistry in three years instead of four.



2. Persons holding the L.D.S. Certificate, granted by one of the Medical authorities of Great Britain, and persons holding the B.D.S. Degree of Melbourne University, Australia, will be admitted as undergraduates in the Department of Dentistry without further examination, and to the final examinations of the degree of D.D.S., on completing one full session at the School of Dentistry of the Royal College of Dental Surgeons of Ontario, and payment of the proper fees.

3. Undergraduates (candidates for examination for the degree), not coming under the provisions of either of the two preceding sections, must have been engaged in the study of Dentistry for four academic years, and have attended four full courses of lectures and laboratory and clinical instruction, embracing all the subjects of the Curriculum, of not less than seven months each, at a School of Dentistry recognized by this University, the last of which must have been at the School of Dentistry of the Royal College of Dental Surgeons of Ontario.

### Examinations.

Candidates for the degree must pass two examinations, an intermediate and a final, an interval of not less than one year intervening between them. Until further provisions be made, a certificate of having passed the intermediate examination of the Royal College of Dental Surgeons of Ontario will be accepted by this University.

Candidates for the final examination, which will be held at a time fixed by the Committee on Examinations, must present to the Registrar satisfactory certificates, covering all the requirements relating to undergraduates as given above, and of having passed the intermediate examination.

The subjects for intermediate examinations shall be:

- (a) Comparative Dental Anatomy.
- (b) General and Dental Histology.
- (c) Bacteriology.
- (d) Anatomy.
- (e) Physiology.
- (f) Chemistry.
- (g) Dental Technic.
- (h) Theory of Operative Dentistry.
- (i) Theory of Prosthetic Dentistry.
- (k) Dental Materia Medica.

The subjects for final examination shall be:

- (a) General Anatomy and Special Anatomy of the Head and Neck.
- (b) Physiology.
- (c) Surgery and General Pathology.
- (d) Chemistry.
- (e) Medicine, Physical Diagnosis, and Anaesthetics.
- (f) Theory and Practice of Operative Dentistry, Dental Pathology.



- (g) Theory and Practice of Prosthetic Dentistry.
- (h) Science and Practice of Dentistry.
- (i) Orthodontia.
- (k) Dental Materia Medica and Therapeutics.
- (l) The Jurisprudence, Ethics, and History of Dentistry.

(The above examinations will be written.)

- (m) Practical Operative Dentistry.
- (n) Practical Prosthetic Dentistry.

Candidates shall be examined in practical work from time to time, during the session of the Royal College of Dental Surgeons, on completion of the required work in the Infirmary and Laboratories of the College.

Annual examinations in April, and supplemental examinations in September, will be conducted under the joint auspices of the University and the Royal College of Dental Surgeons of Ontario.

Regular students of the Royal College of Dental Surgeons proceeding to the degree of D.D.S. may take the final examination in any subject at the close of the session in which it is completed in the College.

Candidates will be credited at the Annual and Supplemental Examinations for term work and term examination, conducted by the Professors in the several subjects, in the proportion of 30 to 70.

No candidate shall be considered as having passed on any paper unless he has obtained 50 per cent. of the marks allotted to the paper.

### **Equivalent Examinations.**

Examinations in the Faculty of Arts in the Department of Natural Science, Division I., are accepted in lieu of examinations for the degree of Doctor of Dental Surgery, as follows:

- (a) Physiology and Chemistry of the Second Year for the Physiology and Chemistry of the intermediate examinations.
- (b) Histology of the Fourth Year for the General Histology and Bacteriology of the intermediate examinations.
- (c) Chemistry of the Third Year and Physiology of the Fourth Year for Chemistry and Physiology of the final examination.
- (d) On application to the Senate, similar credits may be given for similar examinations passed in the Faculty of Arts or the Faculty of Medicine of other Universities.

### **Fees.**

The fee for examination for matriculation, in whole or in part, or for registration of any certificate accepted in lieu of examination, shall be five dollars.

The fee for final examination shall be ten dollars, which shall be paid before writing on any subject of the final examination.

The fee for supplemental examination in one or more of the final subjects shall be ten dollars.

The fee for the degree of D.D.S. shall be fifteen dollars, which shall be paid before writing on the examination of the final year.

No fee shall be charged for transference from any Faculty of the University to the Department of Dentistry.

The fee for admission ad eundem gradum shall be twenty dollars.

### **Concurrent Course in Medicine and Dentistry.**

Students who are matriculants in the Faculty of Medicine and in the Department of Dentistry may take a concurrent course in Medicine and Dentistry, which will extend over seven years.

Students taking this course will pass the regular University examinations in the subjects of the Medical Curriculum from year to year as they are completed in the Medical Faculty and in the final Dental subjects of the curriculum in Dentistry, from year to year as they are completed in the Royal College of Dental Surgeons.

Students taking this concurrent course, who have fulfilled all the requirements for the degree of M.B., and who have successfully passed the examination in the Dental subjects of the curriculum in Dentistry, including Dental Materia Medica and Therapeutics, shall receive the degree of D.D.S.

The fee payable to the University shall be \$50 per year for the first four years, and \$150 per year for the last three years, and the several laboratory fees.

**COURSES OF LECTURES.****METHODS OF INSTRUCTION, WINTER SESSION, 1914-1915.  
CHEMISTRY.**

*Professor:* W. R. LANG.

*Professor of Physical Chemistry:* W. LASH MILLER.

*Associate Professor:* F. B. KENRICK.

*Associate Professor of Organic Chemistry:* F. B. ALLAN.

*Assistants:* R. T. ELWORTHY, W. S. FUNNELL, H. R. BRANDT,  
K. E. BURGESS, N. C. QUA, MISS H. BAMFORD.

All lectures and practical work will be given in the Chemistry Building.

**First Year.**

**Lectures.**—Students attend a course of experimental lectures delivered four times a week in the large lecture theatre. This course embraces the study of the non-metallic and metallic elements and their principal compounds based on Mendelejeff's classification of the elements.

The latter part of the lecture course is devoted to Organic Chemistry. The principals of organic analyses and the basis on which the compounds of carbon are classified, are explained and the typical compounds and derivatives of the "fatty" series specially described. An elementary study of the "aromatic" series is also included in the course.

**Tutorial Classes.**—The class also meets one day a week for instruction in arithmetical and theoretical chemistry.

**Practical Chemistry.**—The laboratory work commences with quantitative and qualitative experiments illustrating the fundamental principles of chemistry; this is followed by work more intimately related to analytical chemistry. Instruction in quantitative methods of analysis is given, and some elementary organic work concludes the course.

Students working in the laboratory are provided with the necessary apparatus on making a deposit of three dollars at the commencement of the session, which will be returned at its close after the following charges have been deducted from it:—

- (1) The cost of all apparatus broken or destroyed.
- (2) Any fines for breach of laboratory rules.

No certificate will be given for the practical work unless the student has passed the practical examinations conducted during the session.

*Text-books:*—Remsen's College Chemistry; Newth's Inorganic Chemistry; General Chemistry for Colleges, Alex Smith; Cohen's Organic Chemistry; Organic Chemistry, Norris; Physical Chemistry for Physicians and Biologists, Cohen and Fischer; An Elementary Laboratory Course in Chemistry, Kenrick and DeLury; Outlines of Qualitative and Quantitative Analysis, Lang.

*Books of Reference recommended:*—Bloxam's Chemistry (Inorganic and Organic); Richter, Inorganic Chemistry; Bernthsen's Organic Chemistry.

# PHYSICS.

*Professor and Director of the Physical Laboratory:* J. C. McLENNAN.

*Associate Professor:* E. F. BURTON.

*Demonstrators:* L. GILCHRIST, J. SATTERLY, W. WILSON.

*Assistant Demonstrators:* E. C. S. DICKSON, MISS R. M. EVANS, G. E. M. JAUNCEY, R. H. WILSON.

The work of instruction in Physics consists of a series of lectures, and a course in practical work in the laboratories.

## First Year.

**Lectures.**—The lectures on Physics will give a concise outline of the subject, and are intended to form a satisfactory foundation for future study in other branches of science.

The various parts will be treated in an experimental manner, and will be considered in the following order:—

### 1. MECHANICS:

General notions and terms, such as velocity, acceleration, mass, momentum, force, moments of force, energy; together with calculations to illustrate the laws.

### 2. HYDROSTATICS AND HYDRODYNAMICS:

Pressures and their transmission, specific gravity, pumps, general properties of liquids and gases at rest and in motion, viscosity, capillary phenomena.

### 3. SOUND.

General explanations of wave-motion, production, propagation and detection of sound waves, reflection, absorption and interference of sound waves, resonance, tuning forks, organ-pipes, vibrating strings and the musical scale, analysis of complex sounds, voice production.

### 4. HEAT.

Thermometers, thermal expansions, calorimetry, specific heat, latent heat, change of state, kinetic theory of gases, diffusion and thermal conduction.

### 5. LIGHT.

Laws of reflection and refraction, mirrors, prisms, lenses, microscope and telescope, dispersion, colour, double-refraction and polarization.

### 6. ELECTRICITY AND MAGNETISM.

Laws of magnetism; static electricity, condensers, electrical conduction in solids, liquids and gases, voltaic cell, chemical magnetic and heating effect of the electrical current, potential, Ohm's Law and its applications, laws of electrical resistance, electromotive forces, induction, the induction-coil, high frequency currents and electrical waves and radioactivity.

### 7. PROPERTIES OF MATTER.

Kinetic theory of matter, existence of molecules, ultramicroscope, Brownian movement, colloidal solutions and their application to body fluids, radioactivity and radiations.



**Practical Work.**—The Practical Work, consisting of a laboratory course of fifty hours, designed to illustrate the principles dealt with in the lectures, will be conducted by a number of Demonstrators under the supervision of the Director of the Laboratory.

The lectures are given on two days per week during the year; one lecture each week bears directly on the practical work assigned to the student, while the other lecture each week is part of a course dealing more particularly with the principles of Physics of special use to students in Medicine and Dentistry.

**Regulations.**—Deposit Fee: Each student taking the laboratory course is required to make a deposit of two dollars (\$2.00) before commencing work. All supplies, apparatus broken or destroyed and all fines will be charged against this deposit, which must be renewed when exhausted. At the close of the session cash balances will be returned on a day appointed for the purpose.

*Text-books:*—Millikan and Gale, A First Course in Physics; Watson, Text-book of Physics.

## BIOLOGY.

*Professor of Biology:*

*Associate Professor of Zoology:* B. A. BENSLEY.

*Associate Professor of Histology and Embryology:* W. H. PIERSOL.

*Assistant Professor of Zoology:* E. M. WALKER.

*Lecturer in Biology:* A. G. HUNTSMAN.

*Lecturer and Laboratory Assistant:* A. F. COVENTRY.

*Class Assistants:* A. D. ROBERTSON, A. R. COOPER, W. HAMILTON, W. H.

T. BAILLIE, N. A. WALLACE, O. C. J. WITHROW, L. O. C.

SKEELES, H. DEW. BALL, R. P. WODEHOUSE.

*Preparator:* T. B. KURATA.

## First Year.

**Lectures.**—1. Students of the First Year will attend a course of lectures on general biology, to be given twice a week throughout the session. This course of lectures is designed as an introduction to the whole range of biological studies. After a sketch of the scope and objects of these, the lectures will treat (1) of the fundamental principles of biology, as illustrated by the simplest animals and plants, (2) of typical forms of higher plants, in ascending order, (3) of typical forms of animals in a similar order, and (4) special reference will be made to those aspects of Biology of interest to students of Medicine.

2. A course of twenty-five lectures given in connection with the practical work of Course 1.

3. A course of twenty-five lectures on embryology during the Easter Term will be chiefly devoted to the development of the external form, organs, and tissues of the human body, but the necessary comparative data for the proper understanding of these will be supplied by reference



to the embryology of the lower vertebrates. The student may consult the large collection of models of embryology in the Museum, which are now furnished with explanatory labels designed to supplement the instruction given in the lectures.

4. A course of fifteen lectures on the principles of General Histology.

**Practical Work.**—1. A course of fifty hours' duration is given on General Biology, in which various types are studied, and which serves as an introduction to the use of the microscope.

2. A course of seventy-five hours on Mammalian Anatomy as an introduction to Human Anatomy is given during the Michaelmas Term.

3. A course of fifty hours on General Histology.

4. A course of twenty-five hours in Embryology given from a selected series of specimens illustrative of the lectures on that subject—Course 3.

### Second Year.

**Lectures.**—A course of ten lectures on the more intricate problems of Human Histology.

**Practical Work.**—A course of fifty hours in Special Human Histology. The student will have the opportunity of providing himself with a set of typical histological specimens.

*Text-books:*—Biology: Parker, Bailey-Coleman, McFarland.

Embryology: McMurrich, Manual of Embryology.

Mammalian Anatomy: Bensley, Practical Anatomy of the Rabbit.

Histology: Piersol, Normal Histology, 8th ed.; Bohm, v. Davidoff and Huber, Text-book of Histology; Bailey, Text-book of Histology, 3rd ed.

*Reference Text-books:*—Embryology: Bailey and Miller, Keibel and Mall. Histology: Schäfer, Text-book of Microscopic Anatomy (Quain's Anatomy, 11th edition; vol. II, pt. 1); Sobotta, Atlas of Human Histology.

### PHYSIOLOGY.

*Professor of Physiology:* T. G. BRODIE.

*Assistant in Physiology:* G. R. MINES.

*Fellows:* W. W. BARRACLOUGH, J. R. SMITH.

The following are the courses of instruction in this Department for Students of Medicine.

### Second Year.

1. A course of lectures on Physiology; two a week.

2. An elementary laboratory course in Physiology; five hours a week.

### Third Year.

3. A course of advanced lectures on Physiology; two a week.

4. A course of lecture-demonstrations on Neurology and the physiology of the Sense Organs; two a week.

5. An advanced laboratory course in Physiology.

6. A course of lectures on selected topics in Physiology.

Every student must attain a certain standard in the laboratory exercises before he will be allowed to proceed to the University examinations in Physiology and Biochemistry.

Throughout the Session oral and, as may be necessary, written examinations will be held to ascertain the extent of the student's knowledge of Physiology, and the results of these, as well as his general work in the laboratory will be used to determine his position in the University Class Lists.

In the laboratory courses the student will be required to make good all loss through breakage or otherwise.

*Text-books*:—Stewart, Text-book of Physiology; Halliburton, Handbook of Physiology (last English edition); Brodie's Essentials of Experimental Physiology; Starling, Human Physiology; Tigerstedt, Lehrbuch der Physiologie des Menschen; Pütter, Vergleichende Physiologie.

*Works of Reference*:—Schäfer, Text-book of Physiology, 2 vols.; Pavlov, The Work of the Digestive Glands, translated by W. H. Thompson; Marshall, The Physiology of Reproduction; Vincent, Internal Secretion and the Ductless Glands; Luciani, Human Physiology.

## BIOCHEMISTRY.

*Professor of Biochemistry*: A. B. MACALLUM.

*Demonstrator in Biochemistry*: R. E. GABY.

*Tutorial Fellows*: J. B. COLLIP, J. H. HOWELL.

The following are the Courses of Instruction in this department for students of Medicine:

### Second Year.

1. An elementary course of lectures in Biochemistry; two a week.
2. An elementary laboratory course in Biochemistry; six hours a week.

### Third Year.

3. A course of advanced lectures on Biochemistry for Honour students; two a week.

4. An advanced laboratory course in Biochemistry for Honour students.

5. A course of lectures on selected topics in Biochemistry.

Every student must attain a certain standard in the laboratory exercises before he will be allowed to proceed to the University examinations in Physiology and Biochemistry.

Throughout the Session oral and, as may be necessary, written examinations will be held to ascertain the extent of the student's knowledge of Biochemistry and the results of these, as well as his general work in the laboratory, will be used to determine his position in the University Class Lists.

In the laboratory courses the student will be required to make good all loss through breakage or otherwise.

*Text-books:* Plimmer, Practical Physiological Chemistry; Halliburton, Essentials of Chemical Physiology; Hawk, Practical Physiological Chemistry; Lusk, Science of Nutrition.

*Works of Reference:* Schäfer, Text-book of Physiology, 2 vols.; Chi tenden, Physiological Economy in Nutrition; Pavlov, The Work of the Digestive Glands, translated by W. H. Thompson; Salkowski, Prakticum der Physiologischen und Pathologischen Chemie (3rd edit on); Hoppe-Seyler der Physiologi ch-und Pathologisch-Chemischen Analyse, bearbeitet von Thierfelder (edition 1909).

### ANATOMY.

*Professor and Director of the Anatomical Department:* J. PLAYFAIR  
MCMURRICH.

*Associate Professor:* H. W. AIKINS.

*Associate Professor of Clinical Anatomy:* G. A. BINGHAM.

*Lecturer in Anatomy:* J. C. WATT.

*Demonstrators:* C. B. SHUTTLEWORTH, E. R. HOOPER, W. A. SCOTT, C. J. COPP, W. B. HENDRY, W. W. JONES, W. W. WRIGHT, N. D. FRAWLEY, G. E. WILSON, N. S. SHENSTONE, O. A. McNICHOL, G. R. PHILP.

### First Year.

**Lectures.**—Throughout the First Year a course of lectures will be given beginning with a discussion of some of the fundamental principles of Human Anatomy and then proceeding to a consideration of the Anatomy of the Skeleton and the Articulations. Attention will be directed especially to the anatomical relationships and significance of the parts considered, their detailed description being taken up in the tutorial classes.

**Practical Work.**—During the Easter Term tutorial instruction will be given in Osteology, the class being divided into small section for this purpose. In connection with these classes arrangements have been made whereby each student may obtain material for private study from the Osteological collection of the Department.

### Second Year.

In the Second Year the work will be principally in the Laboratory, each student being obliged to dissect thoroughly the various regions of the body, following the plan outlined in a "Guide to the Dissection of the Human Body". Demonstrators will be in attendance each day for the purpose of superintending the work and of giving instruction, and will hold frequent examinations with the object of testing the student's progress. Certificates of credit in Practical Anatomy will be granted only to those students whose work has been completed to the satisfaction of the instructors in charge.

The Laboratory will be open from 9 a.m. until 5 p.m. every week-day throughout the session, with the exception of Saturdays when it will be closed at 12 noon.

In connection with the laboratory work lectures will be given by members of the staff, reviewing the work that has been completed. The object of this course will be to supplement the work in the Laboratory by calling attention to the relations and significance of the parts that have been studied and by elucidating with the aid of diagrams and models the anatomy of difficult and important structures.

### Third Year.

**Lectures.**—During the Easter Term a course of lectures will be given on the Anatomy of the Central Nervous System.

**Practical Work.**—In connection with the above course of lectures the class will be divided into small sections, to each of which a Demonstrator will be assigned, for the purpose of a practical study of the anatomy of the Brain.

A course involving the study of series of sections through the human body will also be given, the student being enabled thereby to review the anatomy of the body completely and expeditiously, gaining at the same time more accurate ideas as to the relations of parts than are afforded by dissection.

Opportunity will be afforded, when necessary, for the dissection of parts that were uncompleted in the practical course of the Second Year, or of which a further study seems advisable.

*Text-books:*—Piersol; Morris; Cunningham's Text-book; Gray; McMurrich's Development of the Human Body; Guide to the Dissection of the Human Body, for the use of Students in the Anatomical Laboratory of the University of Toronto.

*Reference Text-books:*—Spalteholz, Hand-Atlas of Human Anatomy; Toldt's Atlas of Human Anatomy; Sobotta's Atlas and Text-book of Human Anatomy; Eycleshymer and Shoemaker, Cross-Section Anatomy; Quain's Anatomy; Barker's The Nervous System; Johnston, Nervous System of Vertebrates; Villiger, Brain and Spinal Cord; Von Bardeleben's Handbuch der Anatomie; Merkel, Topographische Anatomie; Davis, Applied Anatomy.

### PHARMACY AND PHARMACOLOGY; MATERIA MEDICA.

*Associate Professor:* V. E. HENDERSON.

*Instructor in Pharmacy:* J. A. MACDONALD.

*Class Assistants:* F. C. HARRISON, J. H. DUNCAN, R. I. HARRIS,  
D. E. S. WISHART.

### Third Year.

Two courses of laboratory work accompanied by lectures and laboratory talks are given.



**Practical Work.**—LABORATORY COURSE I. Experimental pharmacology. In this course the student obtains an opportunity to become familiar with representatives of the drug stuffs composing the various pharmacological groups. The chief object of the course is to get the student into the habit of accurate observation of the effects produced by drugs and to be able to describe them in accurate pharmacological language. In consequence a great deal of attention is given to the note books kept by each student.

LABORATORY COURSE II Practical pharmacy. This course is very brief, consisting only of a few hours' work on the chemical and physical incompatibles and in dispensing several mixtures, pills and ointments, in order that the student may obtain such insight into dispensing as is necessary to enable him to write prescriptions intelligently.

Total of these two courses, 90 hours.

Arrangements have also been made with the Toronto General Hospital and with the Hospital for Sick Children by which the students of this year will be draughted in turn to act as Assistants in the Hospital Dispensaries for a period of a week.

**Lectures.**—A course of lectures on general pharmacology (35 in all) This course is designed to supplement and extend the knowledge gained in the laboratory and from the prescribed text-book.

**Prescription Writing.**—Each student is expected to hand in answers to the problem in prescription-writing announced each week. These are corrected and returned, and opportunity is given for the discussion of any difficulties with the staff during laboratory hours. Informal talks are also given from time to time as needed.

*Text-book* :—Pharmacy and Materia Medica, Henderson; Pharmacology, Dixon; Meyer and Gottlieb, translated by Halsey.

*Reference Text-books*:—Pharmacology, Cushny; Sollmann, Prescription Writing; Bennett, Medical and Pharmaceutical Latin; Eggleston, Prescription Writing.

## MEDICINE.

*Professor of Medicine and Clinical Medicine*: ALEXANDER MCPHEDRAN.

*Associate Professor of Medicine and Clinical Medicine*: J. T. FOTHERINGHAM.

*Associate Professors of Clinical Medicine*: ALLEN M. BAINES, W. B. THISTLE, A. R. GORDON, R. J. DWYER, H. B. ANDERSON, GRAHAM CHAMBERS, WILLIAM GOLDIE.

*Assistants in Clinical Medicine*: H. C. PARSONS, W. J. MCCOLLUM, J. H. ELLIOTT, G. W. HOWLAND, H. S. HUTCHISON, D. MCGILLIVRAY.

*Demonstrators in Clinical Medicine*: E. C. BURSON, F. A. CLARKSON, B. O'REILLY, D. KING SMITH, C. J. WAGNER, J. H. MCPHEDRAN, C. S. MCVICAR, G. S. STRATHY, G. W. ROSS, R. W. MANN, G. S. YOUNG, A. J. MACKENZIE.

*Assistants in Clinical Medicine*: J. A. O'LEARY, J. LOUDON, G. F. BOYER, M. B. WHYTE, T. J. PAGE.

*Professor of Therapeutics*: R. D. RUDOLF.



**Lectures.**—In the Third Year a short course of lectures is given as an introduction to the Study of Medicine, dealing especially with the physiological aspects of disease.

In the Fourth Year a course of forty lectures is given in the amphitheatre of the Toronto General Hospital, dealing with the general pathology and treatment of disease and serving as a fuller introduction to clinical study. The lectures will be illustrated by plates, diagrams and morbid specimens; also by the presentation of patients when the nature of the subject under consideration makes it desirable.

### Third Year.

In Clinical Medicine the instruction and work is carried on in the wards and in the Out-patient departments of the Toronto General and St. Michael's Hospitals, and in the University laboratories.

*Medical Anatomy and Physical Diagnosis.* Three forenoons in the week during the first half of the session are devoted to demonstrations in the surface anatomy of the body, in the methods of examination, and in the normal and abnormal physical signs with their significance. For this work the class is divided into small groups, each of which is in charge of an instructor.

In the second half of the session these exercises are continued and in addition, instruction is given in history taking, each student being required to take the history of patients and make the physical examinations, the work being supervised by one of the instructors.

In addition, courses of instruction are given in Pathological Chemistry and Clinical Microscopy and each student is required to do the clinical laboratory investigations relating to his own cases.

One clinic is held weekly in the hospital amphitheatre with the Fourth Year.

*Text-books:*—Medicine: Osler.

Clinical Medicine: Sahli, Diagnostic Methods; Hutchison and Rainy, Clinical Methods.

### Fourth Year.

The students of the Fourth Year serve as clinical clerks, devoting the greater part of their time available for Clinical Medicine to the Medical wards, taking the histories, examining patients, and carrying out the clinical laboratory investigation of their cases under the direction of the House Physicians and the Assistant Clinical Instructors.

During each trimester, each student of the Fourth Year shall be required to prepare at least five complete records of Medical cases (history, physical examination and laboratory work) which has been certified as satisfactory by the service in which the work is done.

In addition to this work and instruction, regular clinics are given to ward classes, at which the students present the report of the cases considered. Weekly clinics are held in the hospital amphitheatres at which selected cases are presented.

*Clinical Laboratory.* Each Clinical Clerk is required to carry out a full laboratory investigation in connection with each patient assigned to him.

*Clinical and Pathological Conference.* Each week a clinical and pathological conference will be held throughout the session. Abstracts of the histories of the fatal cases of the week, with diagnosis made before the autopsy, are read. The specimens are then demonstrated, followed by a discussion of the case.

### **Fifth Year.**

In the Fifth Year the time will be devoted wholly to Clinical work in the wards and Out-patient departments of the hospitals and in the laboratories. Each student will be required to take charge of a number of patients, personally recording the results of his examination and laboratory work, and to attend and report on the autopsies of fatal cases.

Instruction will be given to classes in the wards and weekly in the hospital amphitheatre.

In the Out-patient department, besides the general clinic, there are special clinics in Diseases of the Skin, of the Nervous system and in Tuberculosis, all of which groups of students will attend in rotation.

Infectious Diseases will be demonstrated to groups of students at the large City Isolation Hospital, which affords ample facilities for such purposes.

#### *Text-books:—*

Medicine: Osler; Anders; Edwards.

Clinical Medicine: Sahli, Diagnostic Methods; Emerson, Clinical Diagnosis.

#### *Reference Text-books:—*

*Medicine:* Churchill and Peterson, Nervous System; Forchheimer's Therapeutics of Internal Diseases, 5 vols.; Osler, Modern Medicine, 7 vols.; Albutt and Rolleston System; Latham and English, System of Treatment, 4 vols.; Mackenzie, The Heart; Mackenzie, Symptoms and their Interpretations; Sutherland, Dietetics; Starr, Nervous Diseases; Purvis Stewart, Diagnosis of Nervous Diseases; Bury, Diseases of the Nervous System; Hertz, Constipation.

*Clinical Methods and Diagnosis:* Simon, Clinical Diagnosis, 5th edit.; Da Costa, Physical Diagnosis.

*Dermatology:* Stelwagon, Crocker, Hyde, Morris.

*Instruments:—*Students beginning clinical work are strongly advised to supply themselves with the following instruments: Microscope, with condenser and oil immersion lens; Haemoglobinometer, Dare; Haemocytometer, Zeis-Türck; Ophthalmoscope, Lorsch's; Laryngoscope; Stethoscope; Head Mirror; Thermometer; Tape Measure; Dermagraph. Special arrangements have been made for obtaining these instruments.

It is extremely desirable that each student should possess his own microscope, the object being that the instrument which he uses during his laboratory work will be available for his use after graduation.

**PAEDIATRICS.**

*Associate Professors of Paediatrics:* A. M. BAINES, H. T. MACHELL.

*Associate in Clinical Medicine:* D. MCGILLIVRAY.

*Demonstrator in Clinical Medicine:* J. S. GRAHAM.

*Assistant in Clinical Medicine:* A. W. CANFIELD.

**Fourth Year.**

**Lectures.**—This course comprises lectures to Fourth Year students on such subjects as diseases of the newly born, infant feeding, diseases of the digestive system, etc.

**Clinical Work.**—Daily clinics are held at the Hospital for Sick Children on Medical and Surgical cases by the Associate Professors and by other members of the Faculty who are on the staff of the Hospital for Sick Children.

**Fifth Year.**

The Fifth Year, in small groups, will attend the Out-patient Clinic daily at the Hospital for Sick Children.

*Text-books:*—Diseases of Children, L. E. Holt; Chapin and Pisek; Still, Disorders of Infancy and Childhood; Hutchinson, Diseases of Children.

*Reference Text-books:*—Medical Diagnosis and Treatment, Diseases of Children; Garrod, Battin and Thursfield, Diseases of Children.

**THERAPEUTICS.**

*Professor of Therapeutics:* R. D. RUDOLF.

*Demonstrator in Anaesthesia:* S. JOHNSTON.

*Demonstrator of Therapeutics:* C. E. C. COLE.

*Assistant in Anaesthesia:* R. J. MACMILLAN.

Therapeutics is taught in the two final years, and is made as practical as possible.

**Fourth Year.**

**Lectures.**—In the Fourth Year a course of lectures is given in which the general principles of the subject are considered in a systematic way, emphasis being laid upon the fact that Therapeutics includes far more than the employment of drugs. The whole matter is considered more from the standpoint of disease than from that of drugs and other remedies. Diet, hydrotherapy, massage, electricity, anaesthesia and climate are also dealt with. Once a week fourth year students are given a practical demonstration at the hospital of methods of therapy, patients being freely used to illustrate the points.

### Fifth Year.

**Clinical Work.**—In the final year the students are taken in groups at the General Hospital and the different methods of dealing with diseased conditions are demonstrated, generally upon actual patients. Here also prescription writing is practised. These demonstrations are quite informal and are conducted twice a week alternatively in the medical theatre at the hospital and in the wards. Students of the fourth and fifth years will receive individual practical instruction in the administration of anaesthetics.

*Text-books:*—Burney Yeo's *Clinical Therapeutics*, 2 volumes; Hare's *Practical Therapeutics*.

*Reference Text-books:*—Hutchinson & Collier's *Index of Treatment* Lauder Brunton, *Action of Medicines*; Friedenwald and Rührh, *Diet in Health and Disease*; Wood, *Therapeutics, its principles and practice*; Potter, Ortner's *Treatment of Internal Diseases*; Cushny, *Pharmacology and Therapeutics*; Shoemaker, *Materia Medica and Therapeutics*; Hare, *System of Therapeutics*; Forchheimer's *General and Special Treatment of Diseases*; Forchheimer's *Therapeutics of Internal Diseases*; Sajous, *Cyclopaedia of Practical Medicine*.

### SURGERY.

*Professor of Surgery and Clinical Surgery:* I. H. CAMERON.

*Associate Professor of Clinical Surgery and Clinical Anatomy:* G. A. BINGHAM.

*Associate Professors of Clinical Surgery:* A. PRIMROSE, H. A. BRUCE, F. N. G. STARR, P. W. H. McKEOWN, S. M. HAY.

*Associate Professor of Clinical Surgery and in Charge of Orthopaedics:* C. L. STARR.

*Associates in Surgery and Clinical Surgery:* C. B. SHUTTLEWORTH, J. F. UREN, T. B. RICHARDSON, G. SILVERTHORN, E. S. RYERSON, W. J. O. MALLOCH, W. A. SCOTT, W. W. JONES.

*Demonstrators in Clinical Surgery:* W. E. GALLIE, A. B. WRIGHT, M. H. V. CAMERON, N. S. SHENSTONE, G. E. WILSON, R. E. GABY, J. A. ROBERTS.

*Assistants in Clinical Surgery:* A. S. MOORHEAD, A. H. PERFECT, D. E. ROBERTSON, W. W. WRIGHT.

### Third Year.

**Lectures.**—A short course of lectures is delivered during the Michaelmas term on the general principles of Surgery.



**Clinical Work.**—In the Third Year each student receives three hours a week of Clinical instruction, on cases which illustrate—

- |  |                         |
|--|-------------------------|
| 1. Inflammation,   | 8. Gangrene,            |
| 2. Suppuration and Abscess,                                  | 9. Hernia,              |
| 3. Surgical Diseases of the Skin;<br>boils, carbuncles, etc. | 10. Surgical Landmarks, |
| 4. Sepsis; infection and infective<br>diseases,              | 11. History Taking,     |
| 5. Wounds,   | 12. Fractures,          |
| 6. Haemorrhage,  | 13. Bandaging,          |
| 7. Ulceration,   | 14. Instruments,        |
|  | 15. First Aid.          |

#### Fourth Year.

**Lectures.**—Thirty lectures are given throughout the Session on some of the general principles of Surgery. Short courses are included on the special Surgery of certain regions of the body, *e.g.* the abdomen; the head and neck; the extremities, etc., the courses varying from year to year. The majority of the lectures are delivered at the Hospitals and are illustrated by Clinical Cases.

**Practical Work.**—A course of practical demonstrations will be given on the details of minor surgical technique under the following headings:—

1. Principles of aseptic and antiseptic surgery.
2. Preparations for operations:
  - (a) Patient—general preparation; field of operation.
  - (b) Surgeon and assistants—hands; gloves; gowns; caps; masks; etc.
  - (c) Instruments.
  - (d) Room; tables; sterilizers; basins; irrigators; sheets, towels, etc.
3. Dressings; sutures; drains. Their preparation and uses.
4. Instruments.
5. Minor surgical technique.
 

Hypodermics; local anaesthesia; lumbar puncture and spinal injections; transfusions, etc.

Poultices; fomentations; stupes; blisters; cautery; leeches; cupping, etc.

Enemata; douches, etc.

Catheters; bougies; sounds, etc.

Haemostasis; paracentesis, etc.
6. Bandaging.
7. First aid in accidents, drowning, etc.

Each student in this year will be required to take four complete histories during the year. These shall include the history, physical examination, differential diagnosis, description of the operative and non-operative treatment, progress notes, pathological findings, autopsy report and whatever clinical analysis may be necessary. These histories shall be presented to the Clinician and shall be read and, if satisfactory, signed by him and



may be used for teaching purposes in Clinic. The four approved histories must be deposited by the student with the Secretary of the Department before April 15th.

**Clinical Work.**—The time devoted to Clinical teaching in surgery is laid down in the time-table for the Fourth Year on page 89.

During this year an attempt is made to give the student a thorough familiarity with all the ordinary types of surgical conditions met with in general practice. He is taught to make a complete examination of any surgical patient in order that he may be able to arrive at a diagnosis and reasonably scientific treatment.

A special course in Orthopaedic Surgery is given at the Hospital for Sick Children.

### **Fifth Year.**

The work of the Fifth Year in Surgery is entirely Clinical with the exception of one weekly mid-day lecture which is partly didactic and partly clinical. For the present the work incident to Dresserships and obligatory upon all candidates will be done in this year.

An elective course is given in operative surgery on the cadaver.

The duties of the Clinical Clerks attached to the various Surgical Services at the Toronto General, St. Michael's and the Sick Children's Hospitals shall be:

1. To act as assistants to the House Surgeon and to be prepared to carry out his instructions at all times.
2. To take the history of each patient within twenty-four hours of his admission to the wards. To record the physical examination and to do and record the necessary laboratory work.
3. To attend all the operations performed on his Service, and to be prepared to act as an assistant.
4. To do whatever dressings are detailed to him by the House Surgeon.
5. In the event of an autopsy on any patient who has been under his charge, to assist and make the necessary records.
6. To work when required in the Out-Patient Department.
7. That he be required to attend the Clinics given to the Third and Fourth Years on his Service, and be prepared to give a detailed account of the cases being presented, to the Clinician, and, if necessary, under the direction of the Clinician, to act as Demonstrator. Further, that he shall be required to provide and prepare the material for each Clinic to the Third and Fourth Years.
8. That during his term of service he shall be prepared, when directed to do so, to assist in giving and to give anaesthetics to the patients on his Service under the supervision of the anaesthetist.
9. That he be responsible for keeping a record of the Clinics given on his Service and the passing of this record on to the next Clinician when the classes change.

*Text-books*.—Rose & Carless; Spencer and Gask.; Minor Surgery, Foote; Surgical Diagnosis, Gould; A Synopsis of Surgery, Ernest W. Hey Groves; Pye's Surgical Handicraft.

*Reference Text-books*.—

*Surgery*.—Principles of, by Senn, Nancrede, Jackson Clarke, Choyce; Practice of, by Treves, Erichsen; International Text Book, by Warren & Gould; Modern Surgery, by Roswell Park; American Practice of Surgery; Operative Surgery, Burghard, 4 vols.; Surgical Treatment, Cheyne & Burghard; Operative Surgery, by Treves, Jacobson, Bryant, Bickham, Binnie, Kocher, Alexis Thomson v. Schmieden; Genito-Urinary Surgery, White and Martin, Keyes, Casper-Bonney, Taylor, Henry Morris, Morton; Orthopædic Surgery, Bradford & Lovett, Whitman, Jackson Clarke; Fractures and Dislocations, Stinson; Dislocations and Joint Fractures, Cotton; Treatment of, Scudder; Diseases of the Rectum and Anus, Gant, 3rd ed.; Surgery of the Chest, Paget, Carl Beck; General Surgery, J. C. Warren, Lexer-Bevan; Preparatory and after treatment in Operative Cases Haubold, Crandon; Surgery of the Brain, Krause, Rawlings; Clinical Surgical Diagnosis, de Quervain (trans.).

### **PATHOLOGY.**

*Professor of Pathology and Bacteriology and Curator of the Museum and Laboratories*: J. J. MACKENZIE.

*Lecturer in Bacteriology*: D. A. GRAHAM.

*Demonstrators of Pathology*: O. R. MABEE, D. E. ROBERTSON.

*Assistants in Pathology*: F. E. WATTS, G. A. CAMPBELL, C. E. COOPER  
COLE, J. N. LIVINGSTONE, J. A. OILE, A. H. ROLPH, H. J. SHIELDS,  
L. BRUCE ROBERTSON.

*Fellow in Pathology*: A. I. MCCALLA.

*Assistants in Clinical Laboratory*: D. H. BODDINGTON, N. T. MACLAURIN.

*Assistant Curator of the Pathological Museum*: D. E. ROBERTSON

The courses of instruction are as follows:—

#### **Second Year.**

Students receive a course of lectures and practical laboratory exercises during the Easter Term in general Bacteriology, including media making, staining and cultivation of pathogenic micro-organisms, the practical isolation and identification of the most important bacteria pathogenic to man.

#### **Third Year.**

**Lectures**.—1. A course of lectures in General Pathology is given during the Michaelmas and Easter Terms.

**Practical Work**.—2. A laboratory course in Pathological Histology is held four afternoons a week during the Easter Term, illustrating general pathological conditions, including inflammations (acute and chronic) repair, tumors, etc.

3. A practical laboratory class in hæmatology and clinical microscopy.

### Fourth Year.

**Lectures.**—1. A course of didactic lectures is delivered upon selected chapters of special pathology.

**Practical Work.**—2. A laboratory course in Pathological Histology takes place four afternoons a week during the Michaelmas Term. The work taken up in this class illustrates the special pathology of the organs. Alternating with this class are a series of Museum Demonstrations arranged to illustrate the course in Pathological Histology.

3. Throughout the Session autopsies are held at the three Hospitals which students are required to attend and take full notes. On the autopsies they have witnessed they are subsequently examined.

4. Once a week during the Easter Term a Clinical conference on autopsy material is held at the General Hospital.

### Fifth Year.

1. The routine work for all students of the Fifth Year will consist of attendance and assistance at autopsies. Upon such cases as the students have studied in the wards full bacteriological and histological studies will be required.

2. A weekly conference in autopsy material will be held for the whole class.

3. Advanced classes will be held for students who are candidates for Honours in Groups 1 and 4 and for such other students as may be permitted to attend.

An advanced laboratory class in surgical pathology may be arranged for students who purpose writing for Honours in Groups 2 and 3.

*Text-books:*—

*Pathology:*—Adami, Pathology General, vol. I.; Special vol. II.; Delafield and Prudden 8th edition; Grünbaum, Essentials of Morbid Histology. Text book of Pathology—Adami and McCrea; General Pathology—Pembrey and Ritchie. Text book of Pathological Histology, Mallory.

*Bacteriology:*—Muir and Ritchie; Hiss and Zinsner; Park. Infection Immunity and Serum Therapy—Ricketts and Dick.

*Clinical Methods:*—Hutchison & Rainy; Emmerson; Sahli.

### **PATHOLOGICAL CHEMISTRY.**

*Professor of Pathological Chemistry:* J. B. LEATHES.

*Demonstrators of Pathological Chemistry:* F. W. ROLPH, D. H. BODDINGTON.

### Third Year.

**Lectures.**—For students in this year a course of lectures will be given on general disorders of the chemical processes of the body.

**Practical Work.**—Students will receive practical instruction in the Chemical methods employed in the examination of excreta, secretions, organs and body fluids, that is necessary in the study and diagnosis of disease.

**Fourth Year.**

**Lectures.**—A course of lectures for students in this year will be given on questions in the pathology of special organs that are capable of chemical treatment.

**Practical Work.**—An hour is set apart on each day for laboratory work when students will be assisted in the chemical examination of material obtained from cases in the wards. Reports of each student's work will be preserved.

**Fifth Year.**

In addition to the routine clinical laboratory work, an advanced laboratory course will be given to candidates for Honours in the subjects of Groups 1 and 4 and to such other students as may be permitted to take it.

*Text-books:*—Printed directions for laboratory work are given out to the 3rd year class; beyond this the text-books are the standard works on Physiology and Pathology, with Krehl's Clinical Pathology, trans. by Hewlett (Lippincott & Co.).

*Reference Books:*—Oppenheimer, Handbuch der Biochemie; Von Noorden, Metabolism and Practical Medicine (trans. by Walker Hall) 3 vols.; Neubauer and Huppert, Analyse des Harns; Schmidt and Strasburger, Die Fazes des Menschen.

**PSYCHIATRY.**

*Professor in Psychiatry:* C. K. CLARKE.

*Extra-Mural Professor in Psychiatry:* N. H. BEEMER.

*Associate in Psychiatry:* J. M. FORSTER.

*Demonstrator:* HARVEY CLARE.

**Fourth Year.**

**Lectures.**—A brief series of didactic lectures is given, outlining some of the more important psychoses.

**Fifth Year.**

**Clinical Work.**—A clinical course will be given in the Hospital for the Insane. Here the student will be afforded opportunity to obtain a practical knowledge of psychiatry, and to study the laboratory and clinical methods employed in the diagnosis and treatment of various forms of insanity.

*Text-books:*—White's Outlines of Psychiatry; Clinical Psychiatry, Dieffenдорff.



**MEDICAL JURISPRUDENCE.***Professor: N. A. POWELL.***Fourth Year.**

**Lectures.**—About fifteen lectures and class-room demonstrations will be given. These will be illustrated as required by lantern slides and by specimens from the Pathological Museum or from private collections.

The lecture course will embrace *inter alia* a discussion of:—Legal Criminal procedures and the relation of Medical men thereto. Medical evidence, documentary and oral, ordinary and expert. Personal identity of the living and of the dead. Thanatology: The reality of death; *post mortem* changes, autopsies and reports. Causes producing deaths by violence such as the various forms of asphyxia, heat, cold, electricity, etc. Wounds in their medico-legal relations. Blood stains and the examination of blood. Medico-legal aspects of the sexual functions, impotency, sterility and legitimacy. Pregnancy, abortion and infanticide. Rape and allied offences against chastity. Civil and criminal malpractice. Life Assurance. Medical Ethics.

*Text-books:*—Glaister, Reese, Emerson, Draper.

*Reference Text-books:*—Taylor's Principles; Whitthaus and Becker; Peterson and Haines; Dixon Mann; Cattell's *Post Mortem* Pathology; Greene's Life Insurance; Atkinson's Law in Medical Practice; Cathell's The Physician Himself.

**TOXICOLOGY.***Professor of Toxicology: W. H. ELLIS.**Associate Professor of Pharmacology: V. E. HENDERSON.*

Two courses of lectures and demonstrations are now given.

**COURSE 1.** The Chemical detection of poisons, including the identification of the common poisons in their pure state, and their separation from organic matter.

**COURSE 2.** The pharmacology, symptomology, pathology and therapeutics of poisoning. In this course only the more important poisons are dealt with.

**HYGIENE.***Professor: JOHN A. AMYOT.**Associate Professor: J. G. FITZGERALD.*

As heretofore this Department will provide a course embracing a series of illustrative lectures covering public health laws and regulations, vital statistics and the general problems of sanitation to the candidates for the M.B. degree.



It will also provide special lecture courses in first aid, hygiene and sanitation to students in the Engineering, Forestry, Architecture, Household Science and Education departments of the University.

Special Laboratory facilities and instruction will be given to those students of the Department of Engineering qualifying for Sanitary Engineers.

The Department is now prepared to give all the necessary Laboratory and other instruction to graduates leading to the Diploma of Public Health, special laboratories having been provided for this purpose.

*Text-books*:—Rosenau; Parkes; Egbert;

### OBSTETRICS AND GYNAECOLOGY.

*Professor of Obstetrics and Gynaecology*: B. P. WATSON.

*Associate Professors of Obstetrics*: H. T. MACHELL, K. C. MCILWRAITH.

*Associate Professor of Gynaecology and Obstetrics*: A. A. MACDONALD.

*Associate Professor of Gynaecology*: F. W. MARLOW.

*Demonstrators in Obstetrics*: J. A. KINNEAR, M. M. CRAWFORD, W. J. MABEE.

*Demonstrators in Gynaecology*: MISS HELEN MCMURCHY, W. B. HENDRY, A. C. HENDRICK, F. A. CLELAND.

*Assistant Demonstrators in Obstetrics*: S. J. N. MAGWOOD, J. G. GALLIE.

*Assistant Demonstrators in Gynaecology*: H. E. CLUTTERBUCK, R. W. WESLEY.

#### Fourth Year.

**Lectures.**—Obstetrics:—A course of lectures illustrated by diagrams, lantern slides and models will be given. A syllabus indicating the scope of the work is provided. Stated generally, the course consists of two parts. The first part deals with the anatomy and physiology of the female organs of reproduction; the anatomy, physiology and management of normal pregnancy, labour and the puerperium, and the care of the infant. The second part is concerned with abnormal conditions arising during pregnancy, labour, and the puerperium, and with maladies of the infant.

Practical demonstrations on anatomy, the mechanism of labour, the use of obstetrical instruments, etc., will be given to small sections of students.

*Gynaecology*:—A course of lectures illustrated by pathological specimens, diagrams and lantern slides will be given. A syllabus is provided. The lesions of each organ are considered in detail and the methods of gynaecological diagnosis and treatment indicated.

**Clinical Work.**—Obstetrics:—The student attends clinics at the Toronto General Hospital or at St. Michael's Hospital. At these clinics practical instruction is given in the examination of patients, the diagnosis of pregnancy, the management of labour and the puerperium and the care of the infant.

*Gynaecology*:—Clinical instruction is given at the Toronto General Hospital and at St. Michael's Hospital, in the method of case taking, the examination of patients, the use of instruments, and in the conduct of operations.

*Pathological Demonstrations:*—The naked eye and microscopic pathology of the common obstetrical and gynaecological lesions will be demonstrated in the museum.

### **Fifth Year.**

*Obstetrics.*—The work is entirely clinical and consists in demonstrations on interesting and abnormal cases. These demonstrations and clinical lectures are held throughout the session. Students have the opportunity of being present at and assisting in the delivery of patients and may attend outdoor cases.

*Gynaecology.*—Clinical instruction in the examination and diagnosis of gynaecological cases is given to small sections of students. Each student is required to act as clinical clerk to the cases assigned him, to be present at any operations required, and to follow the after-treatment. Operations will be performed on stated days and at these the members of the clinic may be present.

*Pathological Demonstrations:*—A series of demonstrations in continuity with those held during the fourth year will be given in the museum.

*Text-books:*—

*Obstetrics:*—Adam Wright; Eden; Berry Hart; Hirst; Edgar; Whitridge Williams; Jellett; Galabin.

*Gynaecology:*—Barbour & Watson; Dudley; Gilliam; Crossen; Penrose; Eden; Hart & Barbour; Ashton; Montgomery.

*Reference Text-books:*—

*Obstetrics:*—Bumm; Winckel; Munro Kerr, *Operative Obstetrics*; Davis, *Operative Obstetrics*; Lea, *Puerperal Infection*; Ballantyne, *Antenatal Pathology*.

*Gynaecology.*—Kelly, *Operative Gynaecology*; Berkeley & Bonney, *Gynaecological Surgery*; Winter & Ruge, *Gynaecological Pathology*, translated by Clark; Cullen, *Cancer of the Uterus*.

## **OPHTHALMOLOGY AND OTOLGY.**

*Professors:* R. A. REEVE, G. S. RYERSON, G. H. BURHAM.

*Associate Professor:* J. M. MACCALLUM.

*Demonstrators:* COLIN CAMPBELL, W. H. LOWRY, D. N. MACLENNAN.

### **Fourth Year.**

*Ophthalmology:*

A short course of didactic lectures will be given. Ample facilities will be afforded in the out-patient services for acquiring a knowledge of Refraction and of the use of test-lenses; and also of the ophthalmoscope and other instruments employed in diagnosis, so that the student may become practically acquainted with methods in vogue and their application. The anatomy and relations of the eye and orbit will also be considered.

**Fifth Year.**

Instruction will be wholly clinical and practical, and will include, Ophthalmoscopy and its bearings; the bacteriology and pathology of the eye and adnexa; and operations.

*Otology:*

There will be a short course of didactic lectures. Clinically, otology is grouped with diseases of the nose and throat.

*Ophthalmology:—*

*Text-books:*—Manuals of Diseases of the Eye, Berry; J. Edward Jackson; May; Mayou; Nettleship; Parker; Parsons; Swanzy; Veasey; Wood & Woodruff; Sym.

*Works of Reference:*—de Schweinitz; Weeks; Fuchs; Posey & Wright; Theobald; Ball.

*Otology:—*

*Manuals:*—Bacon; Albert Gray.

*Works of Reference:*—Poltzer; Ballengar; Barnhill & Wales.

**OTO-LARYNGOLOGY.**

*Professor:* G. R. McDONAGH.

*Associate Professors:* D. J. GIBB WISHART, GEOFFREY BOYD, J. PRICE BROWN.

*Demonstrators:* PERRY G. GOLDSMITH, G. ROYCE.

The course of instruction in oto-laryngology is carried on in the outpatient department of both the Toronto General and St. Michael's Hospitals.

This course is carried on during both the fourth and fifth years of the curriculum.

**Fourth Year.**

During the fourth year a series of lectures will be delivered upon the various diseases of the ear, nose and throat, ordinarily met with by the general practitioner.

In the fourth year the students will receive instruction in:

- (1) The normal anatomy of the ear, nose and throat.
- (2) The methods of using the head mirror and the various instruments required in examining the ear, nose and throat.
- (3) The ordinary tests for hearing.
- (4) The recognition of the ear, nose and throat, in their normal conditions, as exemplified by clinical material.

**Fifth Year.**

In the fifth year the students will be divided into small groups for the purpose of studying the commoner pathological conditions affecting the various organs, and as much clinical material as possible will be utilized for the purposes of personal observation.

At the close of each class instruction in the fourth year, a clinical examination will be held, and at the final (fifth year) examination the test will be clinical.

*Text-books:*—Parker, Throat and Nose; St. Clair Thompson, Throat and Nose; Albert Gray, Ear; Lambert Lack, Throat and Nose; Watson Williams, Throat and Nose; Phillips, Throat, Nose and Ear; Ballenger, Throat Nose and Ear; Porter, Diseases of the Throat, Nose and Ear.

**LECTURES IN DENTISTRY.**

The Faculty have arranged for a course of lectures to be delivered during the Session, on the application of Dentistry to Medicine. The instruction will be given by a man properly qualified for the purpose and will be delivered to the students of the final year. The course will be obligatory.

# FIFTH YEAR TIME-TABLE

HOUR	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9-12			Medicine.			
2-4		(Tuberculosis Clinic)	Medicine.		(Tuberculosis Clinic)	
9-12			Surgery.			
2-3 3-4	Pathology.	Electives or Surgery. or Medicine. or Obstetrics.	Electives or Surgery. or Medicine. or Obstetrics.	Electives or Surgery. or Medicine. or Obstetrics.	Pathology.	

10 Weeks.

10 Weeks.



FIFTH YEAR TIME-TABLE--Continued.

9 to 10.30	Eye, 1-6. Nose, 7-12. Gynae. 13-18. Obst. 19-24. Paed. 31-36. G. U. Surgery, 25-30	Paed. 1-6. Eye, 7-12. Nose, 13-18. Gyn. 19-24. Obst. 25-30. G. U. Surgery, 31-36	Paed. 7-12. Eye, 13-18. Nose, 19-24. Gynae. 25-30. Obst. 31-36. G. U. Surgery, 1-6 Clin. Therapeutics 1-36.	Obstet. 1-6. Paed. 13-18. Eye, 19-24. Nose, 25-30. Gyn. 31-36. G. U. Surgery, 7-12 Paediatrics 25-36. Infect. Diseases 13-24. Dermatology 1-12.	Gynae. 1-6. Obst. 7-12. Paed. 19-24. Eye, 25-30. Nose, 31-36. G. U. Surgery, 13-18 Clin. Therapeutics 1-36.	Nose, 1-6. Gyn. 7-12. Obst. 13-18. Paed. 25-30. Eye, 31-36. G. U. Surgery, 19-24 Paediatrics 1-12. Infect. Diseases 25-36. Dermatology 13-24.
10.30 to 12						
2-3	Neurology, ( $\frac{1}{2}$ Class) Dermatology Gynaecological Pathology.	Electives or Medicine or Surgery or Obstetrics	Electives or Medicine or Surgery or Obstetrics	Neurology ( $\frac{1}{2}$ Class) Dermatology or Electives	Psychiatry.	
3-4 4-5						
12-1	*Anaesthesia *History of Medicine. *Medical Ethics. *Life insurance.	Surgery. Clinical Lecture.	Medicine. Clinical Lecture.	*Dentistry Laryngology (after March 1st).	Obstetrics.	
4-5		Clinical Conference on Pathological Material.				

## SYSTEM OF CHANGING CLASSES

Date.	Medicine.	Surgery. Pathology. Gynaecological Pathology. Electives.	Eye, Ear, Nose and Throat. Gynaecology. Dermatology. Clinical Therapeutics. Psychiatry. Neurology. Obstetrics. Paediatrics. Electives.
Sept. 29 to Dec. 5.	Nos. 37 to 72.	Nos. 73 to 108.	Nos. 1 to 36.
Dec. 7 to Feb. 27.	Nos. 73 to 108.	Nos. 1 to 36.	Nos. 37 to 72.
Mar. 1 to May 8.	Nos. 1 to 36.	Nos. 37 to 72.	Nos. 73 to 108.

Students who are granted the elective course in Experimental Pathology, Immunology, or Path. Chemistry, which is given in the 1st Trimester, must register in class Nos. 1 to 36 or 73 to 108.

Those who are granted the elective course in Surgery which is given in 2nd Trimester, must register in class Nos. 1 to 36.

Those who are granted the elective course in Medicine or Obstetrics and Gynaecology which is given in 3rd Trimester, must register in class Nos. 73 to 108.

\* Questions on these subjects may be set on the papers in Medicine and Surgery.

# FOURTH YEAR DIDACTIC TIME-TABLE.

## Michaelmas Term.

HOOR	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
1-2	Pathological Histology	Pathological Histology	Pathological Histology.	Pathological Histology.	Topographical Anatomy.
2-3	Pathological Histology.	Pathological Histology.	Pathological Histology.	Pathological Histology.	Surgery.
3-4	Obstetrics	Therapeutics	Gynaecology.	Obstetrics	Medicine.
4-5	Clin. Labor'y	Clin. Labor'y	Clin. Labor'y	Clin. Labor'y	Clin. Labor'y

## Easter Term.

12-1	Clin. Labor'y.	Clin. Labor'y.	Clin. Labor'y.	Clin. Therapeutics.	Clin. Labor'y.
2-3	Med. Jurisprudence 10 weeks. Toxicology, 8 weeks.	Special Pathology.	Clinical Conference on Autopsy Material.	Hygiene.	Hygiene, 5 weeks Med. Juris, 5 weeks
3-4	Otology, 5 weeks. Ophthalmology, 5 weeks. Paediatrics, 6 weeks.	Psychiatry, 6 weeks. Medicine, 10 weeks.	Special Pathology,	Psychiatry, 6 weeks. Medicine, 10 weeks.	Surgery, 8 weeks Path. Chemistry, 8 weeks.
4-5	Gynaecology.	Therapeutics.	Otology, 5 weeks. Ophthalmology, 5 wks. Paediatrics, 6 weeks.	Obstetrics.	Obstetrics.

# FOURTH YEAR CLINICAL TIME-TABLE.

	HOUR	MONDAY.	TUESDAY.	WEDNESDAY	THURSDAY	FRIDAY.	SATURDAY.
10 weeks.	9-10.30	Clinical Therapeutics Obstetrics.	Medicine.	Medicine.	Medicine. (Clin. Lecture)	Medicine.	Medicine.
	10.30-12		Surgery, T.G.H., No. 2 T.G.H., No. 3	Surgery, T.G.H. No. 2. T.G.H. No. 3.	Clin. Labor'y	Surgery, T.G.H. No. 2. T.G.H. No. 3.	Surgery, T.G.H. No. 2. T.G.H. No. 3.
10 weeks.	9-10.30	Surgery, T.G.H. No. 1	Medicine.	Medicine.	Medicine. (Clin. Lecture)	Medicine.	Medicine.
	10.30-12	Eye, Nose	Eye, Nose	Surgery. T.G.H. No. 4.	Eye, Nose	Eye, Nose	Surgery, T.G.H. No. 4.
10 weeks.	9-10.30	Medicine. St. M.H. 2/3 Class W.H.	Medicine. St. M.H. 2/3 Class W.H.	Surgery. H.S.C.	Medicine. St. M.H. 2/3 Class W.H.	Paediatrics	Medicine. St. M.H. 2/3 Class W.H.
	10.30-12	1/3 Class Gynaecology.	1/3 Class Surgery, St. M.H. 2/3 Class W.H. 1/3 Class	Paediatrics.	1/3 Class Surgery. St. M.H. 2/3 Class W.H. 1/3 Class	Surgery. H.S.C.	1/3 Class Surgery, St. M.H. 2/3 Class W.H. 1/3 Class

# SYSTEM OF CHANGING CLASSES FOR FOURTH YEAR

Date.	Medicine. Surgery. Obstetrics. Clinical Therapeutics.	Medicine Surgery. Eye. Ear, Nose and Throat.	Medicine. Surgery. Gynaecology. Paediatrics.
Sept. 29 to Dec. 5.	B	A	C
Dec. 7 to Feb. 27.	C	B	A
Mar. 1 to May 8.	A	C	B



### THIRD YEAR CLINICAL TIME-TABLE.

DATE.	Hour.	MONDAY.	TUESDAY.	WEDNESDAY.
		<p>Medicine.</p> <p>I (9)</p> <p>J (10)</p> <p>K (11)</p> <p>N (14)</p> <p>O (15)</p> <p>Surgery</p> <p>T.G.H. No. 1 (12, 13)</p> <p>Pharmacology.</p> <p>(1-8)</p>	<p>Medicine.</p> <p>I (9) L (12)</p> <p>J (10) M (13)</p> <p>K (11) N (14)</p> <p>O (15)</p> <p>Surgery.</p> <p>T.G.H. No. 2 (1, 2)</p> <p>T.G.H. No. 3 (3, 4)</p> <p>St.M.H. No. 1 (5, 6)</p> <p>St.M.H. No. 2 (7, 8)</p>	<p>Medicine.</p> <p>K (11)</p> <p>M (13)</p> <p>N (14)</p> <p>O (15)</p> <p>Surgery</p> <p>T.G.H. No. 3 (3, 4)</p>
		<p>Surgery.</p> <p>T.G.H. No. 4 (9, 10, 11)</p> <p>H.S.C. (14, 15)</p> <p>Medicine.</p> <p>(L) 12 (M) 13</p> <p>Pharmacology.</p> <p>(1-8)</p>	<p>11 a.m.</p> <p>Anatomy.</p>	<p>Medicine.</p> <p>A (1) F (6)</p> <p>B (2) G (7)</p> <p>C (3) H (8)</p> <p>D (4)</p> <p>E (5)</p> <p>Surgery.</p> <p>T.G.H. No. 1 (12, 13)</p> <p>T.G.H. No. 4 (9, 10, 11)</p> <p>H.S.C. (14, 15)</p>

Sept. 29 to Dec. 5.

# SESSION 1914-15.

THURSDAY.	FRIDAY.	SATURDAY.
<p>Medicine. (1-15) Clinical Lecture with Fourth Year.</p>	<p>Medicine. A (1) E (5) B (2) F (6) C (3) G (7) D (4) Surgery T.G.H. No. 1 (8) Pharmacology. (9 15)</p>	<p>Medicine. A (1) H (8) B (2) J (10) E (5) K (11) F (6) L (12) G (7) T.G.H No. 3 (3, 4)</p>
<p>Physiology. (1-15)</p>	<p>Surgery. T.G.H. No. 2 (1, 2) St.M.H. No. 1 (5, 6) St.M.H. No. 2 (7) Medicine. H (8) Pharmacology. (9-15)</p>	<p>Medicine. C (3) D (4)</p>

# THIRD YEAR CLINICAL TIME-TABLE.

DATE.	HOOR.	MONDAY.	TUESDAY.	WEDNESDAY.
Dec. 7 to Feb. 27.	9—10.30.	Medicine. C (1) G (5) D (2) H (6) E (3) F (4) Surgery T.G.H. No. 1 (7, 8) Clin. Laboratory. (9-15)	Medicine. N (9) K (13) O (10) L (14) M (15) Surgery T.G.H. No. 2 (11, 12) Path. Chemistry. (1-8)	Medicine. N (9) K (13) O (10) I (11) J (12) Surgery. T.G.H. No. 4 (14, 15) Pharmacology. (1-8)
	10.30—12.	Surgery. T.G.H. No. 3 (1, 2) St.M.H. No. 1 (3, 4) St.M.H. No. 2 (5, 6) Medicine. A (7) B (8) Clin. Laboratory. (9-15)	Surgery. T.G.H. No. 4 (14, 15) St.M.H. No. 1 (9, 10) H.S.C. (13) Medicine I (11) J (12) Path. Chemistry. (1-8)	Surgery. T.G.H. No. 2 (11, 12) St.M.H. No. 1 (9, 10) H.S.C. (13) Medicine. L (14) M (15) Pharmacology. (1-8)
Mar. 1 to May 8.	9—10.30.	Medicine. N (11) I (13) O (12) J (14) K (15) Surgery T.G.H. No. 3 (9, 10) Clin. Laboratory. (1-8)	Medicine. E (1) A (5) F (2) B (6) G (3) C (7) H (4) D (8) Surgery T.G.H. No. 2 (7, 8) Path. Chemistry. (9-15)	Medicine. L (9) J (14) M (10) K (15) N (11) O (12) Surgery. T.G.H. No. 4 (13) Pharmacology. (1-8)
	10.30—12.	Surgery, T.G.H. No. 1 (13, 14, 15) H.S.C. (11, 12) Medicine. L (9) M (10) Clin. Laboratory. (1-8)	Surgery. T.G.H. No. 4 (5, 6) St.M.H. No. 1 (1, 2) St.M.H. No. 2 (3, 4) Medicine C (7) D (8) Path. Chemistry. (9-15)	Surgery. T.G.H. No. 1 (14, 15) T.G.H. No. 3 (9, 10) H.S.C. (11, 12) Medicine I (13) Pharmacology. (1-8)

# SESSION 1914-15.

THURSDAY.	FRIDAY.	SATURDAY.
<p>Medicine. Clinical Lecture with Fourth Year. (1-8)</p> <p>Clin. Laboratory. (9-15)</p>	<p>Medicine. C (1) G (5) D (2) H (6) E (3) F (4) Surgery T.G.H. No. 1 (7, 8) Pharmacology. (9-15)</p>	<p>Medicine. N (9) K (13)<sup>a</sup> O (10) L (14) I (11) M (15) J (12)</p> <p>Path. Chemistry. (1-8)</p>
<p>Medicine. C (1) G (5) D (2) H (6) E (3) A (7) F (4) B (8)</p> <p>Clin. Laboratory. (9-15)</p>	<p>Surgery. T.G.H. No. 3 (1, 2) St.M.H. No. 1 (3, 4) St.M.H. No. 2 (5, 6) Medicine A (7) B (8) Pharmacology. (9-15)</p>	<p>Medicine. N (9) K (13) O (10) L (14) I (11) M (15) J (12)</p> <p>Path. Chemistry. (1-8)</p>
<p>Medicine. Clinical Lecture with Fourth Year. (9-15)</p> <p>Clin. Laboratory. (1-8)</p>	<p>Medicine. E (1) C (7) F (2) D (8) G (3) H (4) Surgery. T.G.H. No. 4 (5, 6) Pharmacology. (9-15)</p>	<p>Medicine. B (6) C (7) G (3) D (8) A (5) H (4)</p> <p>Path. Chemistry. (9-15)</p>
<p>Medicine. L (9) I (13) M (10) J (14) N (11) K (15) O (12)</p> <p>Clin. Laboratory. (1-8)</p>	<p>Surgery. T.G.H. No. 2 (7, 8) St.M.H. No. 1 (1, 2) St.M.H. No. 2 (3, 4) Medicine A (5) B (6) Pharmacology. (9-15)</p>	<p>Medicine. G (3) E (1) A (5) F (2)</p> <p>Path. Chemistry. (9-15)</p>

N.B.—Numbers in brackets refer to number of student classes. Letters after Medicine refer to Teachers as printed on next two pages. T.G.H. No. 1 refers to Toronto General Hospital Teaching Group with its numbers, St. M.H. to St. Michael's Hospital, and H.S.C. to the Hospital for Sick Children.

# CLINICAL TEACHING GROUPS

## MEDICINE.

Teacher's Letter.	NAME.	Hospital.	Sept. 29th to Dec. 5th.	Dec. 7th to Feb. 27th.	Mar. 1st to May 8th
A	Dr. F. S. Park	T.G.H.	1	7	5
I	Dr. J. Oille,	T.G.H.	9	11	13
J	Dr. C. S. McVicar,	T.G.H.	10	12	14
B	Dr. G. S. Strathy,	T.G.H.	2	8	6
K	Dr. E. C. Burson,	T.G.H.	11	13	15
L	Dr. G. S. Young,	T.G.H.	12	14	9
C	Dr. G. Boyer,	T.G.H.	3	1	7
D	Dr. G. Bates	T.G.H.	4	2	8
M	Dr. C. J. Wagner,	T.G.H.	13	15	10
E	Dr. H. S. Hutchison,	St. M.H.	5	3	1
F	Dr. J. H. Elliott	St. M.H.	6	4	2
N	Dr. R. W. Mann,	St. M.H.	14	9	11
G	Dr. B. R. O'Reilly,	St. M.H.	7	5	3
H	Dr. J. H. McPhedran,	St. M.H.	8	6	4
O	Dr. J. D. Loudon,	St. M.H.	15	10	12



# CLINICAL TEACHING GROUPS—Continued.

## SURGERY.

TEACHING GROUPS.	Sept. 29th to Dec. 5th.	Dec. 7th to Feb. 27th.	Mar. 1st to May 8th.
T.G.H. No. 1. Prof. I. H. Cameron, Dr. N. S. Shenstone, Dr. R. E. Gaby,	8, 12, 13	7, 8	13, 14, 15
T.G.H. No. 2. Prof. A. Primrose, Prof. F. N. G. Starr, Dr. E. S. Ryerson, Dr. J. A. Roberts,	1, 2	11, 12	7, 8
T.G.H. No. 3. Prof. H. A. Bruce, Dr. W. J. O. Malloch, Dr. A. S. Moorhead, Dr. O. R. Mabee,	3, 4	1, 2	9, 10
T.G.H. No. 4. Prof. G. A. Bingham, Dr. C. B. Shuttleworth, Dr. T. B. Richardson, Dr. A. B. Wright,	9, 10, 11	14, 15	5, 6, 13
St. M. H. No. 2. Prof. W. McKeown, Dr. G. E. Wilson,	7, 8	5, 6	3, 4
St. M. H. No. 1. Dr. J. F. Uren, Dr. G. Silverthorn, Dr. M. H. V. Cameron,	5, 6	3, 4 9, 10	1, 2
H.S.C. Prof. C. L. Starr, Dr. W. E. Gallie, Dr. L. B. Robertson,	14, 15	13	11, 12

# THIRD YEAR DIDACTIC TIME-TABLE.

## Michaelmas Term.

Hour	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
12-1		Physiology.	Physiology	Physiology.	
1-2	Pharmacology.				General Pathology.
2-3	Anatomy.	Physiology.	Surgery.	Physiology.	Anatomy.
3-4	Anatomy.	Anatomy.	Anatomy.	Physiology.	Anatomy.
4-5	Anatomy.	Anatomy.	Anatomy.	Pathological Chemistry	Anatomy.

## Easter Term.

12-1		Psychology (10 weeks)		Physiology.	
1-2	General Pathology		Pathological Histology.		General Pathology.
2-3	Pathological Histology.	Physiology.	Pathological Histology.	Physiology.	Pathological and Bacteriological Laboratory.
3-4	Pathological Histology.	Physiology.	Medicine.	Pathological Histology.	
4-5			Pharmacology.	Pathological Histology.	

**SECOND YEAR TIME-TABLE.**  
**Michaelmas Term.**

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9-10	Physiology.	Biochemistry.	Physiology.	Biochemistry.	Histology.	Anatomy Pr.
10-11	Anatomy.	Physiology Pr.	Physiology Pr.	Biochemistry.	Biochemistry.	Anatomy Pr.
11-12	Histology Pr. A.	Physiology Pr.	Physiology Pr.	Anatomy.	Histology Pr. B.	Anatomy Pr.
12-1	Histology Pr. A.	Physiology Pr.	Physiology Pr.		Histology Pr. B.	
2-5	Biochemistry Pr.	Anatomy Pr.	Anatomy Pr.	Anatomy Pr.	Biochemistry Pr.	

**Easter Term.**

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9-10	Physiology.	Biochemistry.	Physiology.	Biochemistry.	Histology.	Anatomy Pr.
10-11	Anatomy.	Physiology Pr. until Feb. 6th.	Physiology Pr. until Feb. 6th.	Physiology.	Biochemistry.	Anatomy Pr.
11-12	Histology Pr. Bacteriology.	Bacteriology to end of session.	Bacteriology. to end of session.	Anatomy.	Histology Pr. Bacteriology.	Anatomy Pr.
12-1	Histology Pr. Bacteriology.				Histology Pr. Bacteriology.	
2-5	Biochemistry Pr.	Anatomy Pr.	Anatomy Pr.	Anatomy Pr.	Biochemistry Pr.	

Histology and Bacteriology will alternate in a manner to be announced.

**FIRST YEAR TIME-TABLE, SESSION 1914-15.**  
**Michaelmas Term.**

Hour	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9-10	Physics Pr. B. Histology Pr. A.	Biology Pr. A. Mammalian Anatomy B.	Physics.	Histology.	Anatomy.	Anatomy.
10-11	Physics Pr. B. Histology Pr. A.	Biology Pr. A. Mammalian Anatomy B.	Physics Pr. A. Biology Pr. B.	Histology Pr. B. Mammalian Anatomy A.		
11-12	Biology.	Biology.	Physics Pr. A. Biology Pr. B.	Histology Pr. B. Mammalian Anatomy A.	Chemistry.	
12-1	Chemistry	Chemistry	Chemistry.	Biology.	Physics.	
2-3	Chemistry Pr. B. Mammalian Anatomy A.	Chemistry Pr. B. Mammalian Anatomy A.	Chemistry Pr. A. Mammalian Anatomy B.	Chemistry Pr. A. Mammalian Anatomy B.		
3-4	Chemistry Pr. B. Mammalian Anatomy A.	Chemistry Pr. B. Mammalian Anatomy A.	Chemistry Pr. A. Mammalian Anatomy B.	Chemistry Pr. A. Mammalian Anatomy B.		
4-5	Chemistry Pr. B.	Chemistry Pr. B.	Chemistry Pr. A.	Chemistry Pr. A.	Chemistry.	

### Easter Term.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9-10	Physics Pr. A. Histology Pr. B.	Biology Pr. B.	Physics.	Histology.	Anatomy.	Anatomy.
10-11	Physics Pr. A. Histology Pr. B.	Biology Pr. B.	Physics Pr. B. Biology Pr. A.	Histology Pr. A.	Biology.	Biology.
11-12	Biology.	Embryology.	Physics Pr. B. Biology Pr. A.	Histology Pr. A.	Chemistry.	
12-1	Chemistry.	Chemistry.	Chemistry.	Embryology.	Physics.	
2-3	Chemistry Pr. B. Osteology Pr. A.	Chemistry Pr. A. Osteology Pr. B.	Chemistry Pr. B. Embryology Pr. A.	Chemistry Pr. A Osteology Pr. B.	Embryology Pr. B. Osteology Pr. A.	
3-4	Chemistry Pr. B. Osteology Pr. A.	Chemistry Pr. A. Osteology Pr. B.	Chemistry Pr. B. Embryology Pr. A.	Chemistry Pr. A. Osteology Pr. B.	Embryology Pr. B. Osteology Pr. A.	
4-5	Chemistry Pr. B. Osteology Pr. A.	Chemistry Pr. A. Osteology Pr. B.	Chemistry Pr. B. Osteology Pr. A.	Chemistry Pr. A. Osteology Pr. B.	Chemistry.	



**THE MEDICAL BUILDING.**

The Medical Building is situated between the University Library and the anatomical wing of the Biological Department.

It is three storeys in height in front, with an additional storey and sub-basement in the wings, which extend eastward. Two large lecture rooms are provided which flank the main building; the larger has accommodation for about three hundred and fifty students; the smaller for about two hundred students.

In the south wing, in what may be called the basement storey, are situated lavatories, recreation rooms and reading rooms for the students; in the same storey in the north wing is placed a large museum of hygiene.

The three main floors of the building are arranged upon what has been called the unit-system, a unit-room being thirty feet long by twenty-three feet deep, lighted on its long face by large windows.

These rooms may be united so as to form large laboratories or may be cut in two where it is necessary to have smaller rooms.

The south wing and the main portion of the building are occupied by the Department of Physiology and Biochemistry whilst the north wing accommodates the final departments of Medicine.

On the ground floor in the main portion are situated in front the Secretary's office, a large faculty room, a lavatory, and a library.

In the north wing in this floor are placed a chart and preparation room behind the lecture theatre, and on the third floor units are occupied by the Department of Pharmacology.

An interesting feature of the building is the provision which is made for research students by the presence of a series of small rooms in front of the south lecture room, each large enough to accommodate one or two workers.

As will be seen from the above description, a series of laboratories and lecture theatres is provided on the University grounds where the most ample facilities are afforded for both the practical and didactic instruction of students.

As heretofore, lectures and demonstrations will be given in the east wing of the Biological building in Biology and in the west wing in Anatomy; in the Chemical Laboratories in Chemistry and in the Physics building in Physics. It is impossible to provide more complete and efficient accommodation for the teaching of scientific medicine than that which exists in the University of Toronto to-day.

**THE NEW PATHOLOGICAL BUILDING.**

Is on University Avenue and connected by a covered corridor with the Out-patient Department and so with the rest of the Toronto General Hospital. On the basement, or ground floor, are the Pathological Museum, lecture room and autopsy room as well as students' coat room and lavatories. On the first floor are rooms for the Hospital Pathologist and the routine Hospital pathology, and class rooms for pathological histology and

bacteriology. On the second floor the Professor of Pathology and Lecturer in Bacteriology have their private laboratories, and there are rooms for the Departmental Library and special classes in Pathology, in addition to a set of laboratories for pathological chemistry for the use of students in the Fourth and Fifth Years. On the third floor are the class rooms for systematic instruction in pathological chemistry and the laboratories for the staff in this Department, including balance, polari-meter, combustion and experimental rooms. Above this in the roof is the accommodation for animals.

Connected with the autopsy room is a cold storage plant with accommodation for twelve cadavers, and by means of a brine circulation, refrigerators in the staff laboratories on the first, second and third floors are kept cold. For many of the laboratories too there is a compressed air service.

The lecture room has seat for about 150 students and is connected with a room for preparing experimental demonstrations.

The museum is planned especially for the instruction of students; a small catalogue room and a preparation room are connected with it.

The class rooms are divided into small units and are exceptionally well lighted.

Lockers are provided for more than 300 students in the laboratories for pathological chemistry so that every student working in the Hospital may have his own place and apparatus.

The building is of fire-proof construction throughout.

### **THE TORONTO GENERAL HOSPITAL.**

The new Hospital has more than six hundred beds, and during the year will admit to its wards about seven thousand patients.

The Out-door Department, which has been elaborately equipped with especial attention to the requirements of teaching as well as treatment, is designed to receive and care for several hundred patients each day, if necessity demands.

The Hospital is for the treatment of acute medical and surgical diseases, and the members of the staff are, in nearly every instance, drawn from the University Medical Faculty.

The Hospital Block contains ten acres, and the group of buildings includes almost everything necessary to enable a student to acquire a practical knowledge of the profession of Medicine.

On the south-west corner is situated the large Pathological Building, which is also an integral part of the Hospital. In it are found the Pathological, Clinical, Chemico-Pathological and Vaccine Laboratories, as well as the Autopsy Room, Museums, etc. The Pathological Building is regarded as one of the most complete in America.

North of the Pathological Unit is found the Out-Patients' Department already referred to; then follows the Emergency Hospital, fully equipped with every modern device necessary for the immediate care and treatment

of emergency patients. In this building arrangements have been made for the teaching and demonstration of practical methods in minor surgery.

The Medical Wing, the Administration Building and Surgical Wing face College Street. These groups embody every modern requirement in hospital equipment, and special facilities for the student are provided—such as lecture room, lunch room, cloak room, etc.

Twelve Operating Rooms are to be found in the different Surgical sections. South of the Surgical Wing is located the Obstetrical Hospital with eighty beds.

### Clinical Training.

Clinical instruction is given in the various departments of the Hospital on all classes of patients.

I. *Theatre Lectures*:—Clinical Lectures are given on patients brought from the wards to the large theatre, by the professors of clinical medicine and of clinical surgery to the students of the Third, Fourth and Fifth years.

#### II. *Instruction in the Wards*:—

(a) *Medicine and Surgery*:—A systematic course of bedside instruction is given to a limited class of students. Arrangements are such that each physician and surgeon or his assistant is in daily attendance for the purpose of imparting instruction at the bedside. By this means provision is made for continuous daily work in the ward, and students of the Third, Fourth and Fifth years are required to avail themselves of it.

(b) *Gynaecology*:—Small classes of students receive instruction in diseases peculiar to women in the wards specially devoted to the treatment of such patients. These classes meet daily. Increased facilities have recently been provided for an out-door Gynaecological clinic.

(c) *Obstetrics*:—In the Obstetrical Hospital, final students are permitted to witness and assist in the conduct of *labours*. Students are also allowed to make engagements with out-patients and to attend them in confinement at their own home.

(d) *Ophthalmology, Otology, Laryngology and Rhinology*:—Diseases of the eye, ear, throat and nose are studied in the wards of the Andrew Mercer Infirmary.

III. *Surgical Operations*:—Surgical operations are performed in the various operating theatres every morning, or in cases of emergency at any time during the day or night when required.

IV. *Out-patients' Clinics*:—The recent provision which has been made for the accommodation of out-patients will afford unsurpassed facilities for instruction in the important class of diseases which here pass under observation. Physicians and Surgeons are in attendance daily, and the patients serve to illustrate the instruction. The cases presenting themselves in the special departments of the Hospital devoted to diseases of the eye, ear, etc., are available in the same manner. There also is an out-door clinic in gynaecology.

**V. Pathology:**

(a) Autopsies:—These are performed at stated hours by the Professor or the Demonstrator of Pathology. The examinations are conducted in a systematic way, and instruction on the morbid conditions found is imparted to the students. The bearings of the gross post-mortem appearances on the conditions previously found at the bedside are carefully investigated, and, when necessary, arrangements are made for further examination, microscopical and chemical. There were 123 autopsies during the year.

(b) The examination and analysis of the various fluids, excreta and pathological products of patients in the wards, are conducted in the University Hospital laboratory. Students are required to keep systematic records of the results obtained by these examinations.

**Clinical Clerks and Surgical Dressers.**

Clinical clerks and surgical dressers are appointed to act for limited periods. They are required to take complete histories of cases allotted to them, and to receive certificates for the same, as required by the Ontario Medical Council. Post-mortem clerks are appointed, and are required to make complete reports of all autopsies made in the post-mortem room, which is situated in the Hospital grounds. Clinical clerks and surgical dressers are also appointed in the departments of gynaecology, ophthalmology and otology.

Every student in the Department of Surgery shall be required to take the history, attend the dressing and keep the record of four cases in the Ward.

If any such cases come to operation he shall attend the same, disinfect himself, don an operating gown and come within the pale of the theatre to render such assistance as may be required of him, and to record the facts of the operation and the result. If any such come to post-mortem examination he shall attend the same, render such assistance as may be required of him and record the findings.

Students in Clinical Medicine shall be required to observe this last regulation respecting attendance at post-mortem examinations.

**Resident Assistants in the Hospital.**

A number of resident assistants are appointed annually from the graduates in medicine of the University, and hold their positions for two years.

They will have full opportunities for acquiring experience in the general and special wards of the Hospital, and during the session they will have charge under the physicians and surgeons in the general wards.



**HOSPITAL FOR SICK CHILDREN.**

This large Hospital, with 160 beds, is entirely devoted to diseases in children, there having been 1,294 cases treated during the last year. In the Out-patient Department, 17,862 patients were attended. The old building has been remodelled during the past year and a large new wing has been built on the west side of the present building. These alterations and additions include new operating theatres, out-patient department, pathological laboratories and wards for infectious cases. In the clinics, cases exemplifying the various diseases in infancy and childhood will be exhibited. Abundant opportunities for a personal examination of all cases are afforded.

Resident assistants are appointed annually from the graduates in medicine of the University, and hold their position for the year. The opportunity thus afforded for obtaining a practical knowledge of this very important department of medical practice is unsurpassed.

**ST. MICHAEL'S HOSPITAL.**

This institution is conducted as a General Hospital, where medical, surgical and obstetrical cases are admitted. The number of patients admitted last year was 3,258 while 9,342 cases were treated in the out-patient department. Fifty-five autopsies were performed. There were 290 births in the Obstetrical Department. The accommodation has recently been enlarged by the addition of a new wing, so that there are now 400 beds. An operating theatre has been provided, constructed with all the necessary modern equipment for the practice of antiseptic surgery.

Clinical instruction is given in this Hospital by those members of the staff who are also on the teaching staff of the University of Toronto. Opportunity is also provided for the study of Pathology. Post-mortem examinations are conducted systematically so that students may avail themselves of the material in this department. Clinical clerks and surgical dressers are appointed from the students in attendance at the Hospital.

Resident assistants are appointed annually from the graduates in Medicine of the University of Toronto.

**GENERAL INFORMATION FOR STUDENTS.  
DISCIPLINE.**

The Council of University College and the governing bodies of the federated universities and colleges, respectively, have disciplinary jurisdiction over and entire responsibility for the conduct of their students in respect of all matters arising or occurring in or upon their respective college buildings and grounds, including residences.



The councils of such of the faculties as have assigned for their separate use any building or buildings and grounds, including residences, have disciplinary jurisdiction over and entire responsibility for the conduct of all students in their respective faculties in respect of all matters arising or occurring in or upon such building or buildings and grounds.

In all such cases, and, save as aforesaid, as respects all students to whatsoever college or faculty they may belong, disciplinary jurisdiction is vested in the Caput, but the Caput may delegate its authority in any particular case or by any general regulation to the council or other governing body of the university or college or faculty to which the student belongs.

If there be any question as to the proper body to exercise jurisdiction in any matter of discipline which may arise, the same shall be determined by the Caput, whose decision shall be final.

Disciplinary jurisdiction includes the power to impose fines.

### REGULATIONS RELATING TO STUDENTS.

1. No student will be registered in any year, or be allowed to continue in attendance, whose presence for any cause is deemed by the Faculty Council or Caput to be prejudicial to the interests of the University. Registration in any year does not entitle a student to registration in a subsequent year.

2. Students are required to attend the course of instruction and the examinations in all subjects prescribed for students of their respective standing, and no student will be permitted to remain in the University who persistently neglects academic work.

3. All interference on the part of any student with the personal liberty of another, by arresting him, or summoning him to appear before any tribunal of students, or otherwise subjecting him to any indignity or personal violence, is forbidden by the Council. Any student convicted of participation in such proceedings will render himself liable to expulsion from the University.

4. A student who is under suspension, or who has been expelled from a College or the University, will not be admitted to the University buildings or grounds.

5. The constitution of every University society or association of students and all amendments to any such constitution must be submitted for approval to the Caput. All programmes of such societies or associations must, before publication, receive the sanction of the Caput. Permission to invite any person not a member of the Faculty of the University to preside at or address a meeting of any society or association must be similarly obtained. Societies and associations are required to confine themselves to the objects laid down in their constitution.

6. The name of the University is not to be used in connection with a publication of any kind without permission of the Caput.

**THE UNIVERSITY OF TORONTO MEDICAL SOCIETY.**

This Society consists of the graduates and undergraduates enrolled in the Faculty of Medicine of the University of Toronto. It is under the patronage of the members of the Faculty of Medicine and its object is to deal with all matters pertaining to the general interest and welfare of the students, especially:—

(a) To encourage interest in general medical science and literature, and in pursuit of medical studies.

(b) To provide a supply of daily newspapers, periodicals, magazines and music for the reading rooms; also telephones for the convenience of students.

(c) To be a means of communication between the Student body and the Faculty or others, when such communication is desirable.

(d) To provide a series of entertainments for students at intervals during the Session.

(e) Each student will be required to pay the annual fee of one dollar to the Treasurer of the Society.

**UNIVERSITY OF TORONTO YOUNG MEN'S CHRISTIAN ASSOCIATION.**

The aim of this organization is to be of service to the undergraduates. At the commencement of the fall term it conducts a general information bureau where lists of inspected boarding houses are kept. Handbooks containing information that is of interest and importance to every student are presented to the men by the Association. The dose tables, prescriptions and chemical tests which are included in the Medical edition of this handbook make it of permanent value to every student in Medicine. The Association also endeavours to assist the men of the first year to become acquainted with each other and with men outside their own class by arranging a reception for them early in the year. For those students who find it difficult to meet all the expenses of a college course an employment bureau was opened last year, by means of which employment was provided for the spare hours of a few deserving students.

On Sunday mornings, for a greater part of the academic year, the Colleges' Sermon Series is conducted in the University Convocation Hall. The preachers at these services are among the strongest speakers to students in Canada and the United States.

The Bible Study Department of the Association has proven most interesting and helpful to the students. The method adopted for this study is the group system which means that the men who are following the work meet in groups of from six to eight in number at a time and place convenient to the members of the individual group. Each group is led—not taught

—by a fellow student. As a result of the freedom of discussion which this method assures, and of the systematic nature of the study, great interest is aroused in the things which really count in life.

Mission Study classes are conducted on the same principle and afford an excellent opportunity for acquiring an acquaintance with the great world problems of our age.

### **REGULATIONS FOR LICENCE TO PRACTISE.**

For official information of all matters relative to the regulations for license to practise in the various Provinces in the Dominion, students should communicate with the Registrar. The following is a list of the names and addresses of the Registrars of the Medical Councils:

Ontario—Dr. J. L. Bray, 170 University Avenue, Toronto, Ontario.

Quebec—Dr. J. Gauvreau, 30 St. James Street, Montreal, and Dr. C. R. Paquin, Quebec, P.Q.

New Brunswick—Dr. Stewart Skinner, St. John.

Nova Scotia—Dr. A. W. H. Lindsay, 241 Pleasant Street, Halifax.

Prince Edward Island—Dr. S. R. Jenkins, Charlottetown.

Newfoundland—Dr. H. Rendell, St. John's, Newfoundland.

Manitoba—Dr. J. S. Gray, 358 Hargrave Street, Winnipeg, or W. J.

Spence, Registrar University of Manitoba, Winnipeg.

Alberta—Dr. G. Macdonald, Calgary, Alta.

Saskatchewan—Dr. G. A. Charlton, Regina.

British Columbia—Dr. C. J. Fagan, Victoria.

**MEDALLISTS.****Medicine.***g. gold medal; s. silver medal.*

Year.	Year.	Year.
58 Oille, L. S.-g.	73 Close, J. A.-g.	89 Godfrey, F. E.-s.
Aikins, M. H.-s.	Beeman, M. I.-s.	90 Barker, L. F.-g.
Millar, T.-s.	Wright, A. H.-s.	Cullen, T. S.-s.
59 Barnhart, C. E.-g.	Hagel, S. D.-s.	Philip, W. H.-s.
King, J.-s.	74 Fraser, D. B.-g.	McFarlane, M. T.-s.
Francis, W. F.-s.	Brown, O. C.-s.	McGillivray, C. F.-s.
60 Bascom, J.-g.	Farewell, A.-s.	91 Barnhardt, W. N.-g.
Playter, E.-s.	Cameron, I. H.-s.	Bollen, P.-s.
Tisdell, F. B.-s.	Shaw, G.-s.	Boyd, G.-s.
Morton, E. D.-s.	Fraser, D.-s.	McGorman, G.-s.
Ogden, W. W.-s.	75 Britton, W.-g.	92 Bruce, H. A.-g.
Martyn, D. H.-s.	White, J.-s.	Middlebro, T. H.-s.
61 Hudson, A.-g.	Bennett, J. H.-s.	Gowland, R. H.-s.
Elliot, J. D.-s.	Eakins, J. E.-s.	Brown, J. N. E.-s.
62 Dolster, J.-g.	76 McPhedran, A.-g.	93 Harvie, J. N.-g.
De Grassi, G. P.-g.	Lackner, H. G.-s.	South, T. E.-s.
63 Ramsay, W. F.-g.	Bowerman, A. C.-s.	Elliott, W.-s.
64 McLaughlin, J. W.-g.	Wilson, W. J.-s.	Futcher, T. B.
65 Burnham, E. L.-g.	77 Stuart, W. T.-g.	Harvey, E. E. Æq-s.
McCarthy, J. L. G.-s.	Orr, R. B.-s.	94 McCollum, W. J.-g.
Kitchen, E. E.-s.	Richards, N. D.-s.	Rutledge, H. N.-s.
66 Mickle, W. J.-g.	78 Griffin, H. S.-g.	Crain, W. E.-s.
McCullough, J.-s.	Meek, H.-s.	Johnston, H. A.-s.
Wadsworth, J. J.-s.	Bonnar, J. D.-s.	95 Merritt, A. K.-g.
67 Sparks, T.-s.	Kennedy, G. A.-s.	McKay, T. W. G.-s.
Palmer, R. N.-s.	Gardiner, J. H.-s.	McCrae, T.-s.
Harbottle, R.-s.	79 Burt, F.-g.	Hunter, A. J.-s.
Eccles, F. R.-s.	Mills, R. P.-s.	96 McCaig, A. S.-g.
McFarlane, N.-s.	Chappell, W. F.-s.	Roberts, E. L.-g.
Newton, J. H.-s.	80 Cross, W. J.-g.	Graef, C.-s.
68 Brown, J. P.-g.	Bryce, P. H.-s.	Goldie, W.-s.
Hunt, R. H.-s.	Ferguson, J.-s.	Macklin, A. H.-s.
Howe, T. C.-s.	81 Duncan, J. H.-g.	97 Elliott, J. H.-g.
69 Graham, J. E.-g.	82 Wallace, R. R.-g.	Hume, J. J. C.-s.
Humble, C.-s.	Duncan, J. T.-g.	Nichol, R.-s.
McCollum, J. H.-s.	83 Robinson, W. J.-g.	Yeomans, W. L.-s.
Bentley, T. B.-s.	Dolsen, F. J.-g.	98 McCrae, J.-s.
70 Greenless, A.-g.	84 Clerke, J. W.-g.	Sutherland, G. A.-s.
Burgess, T. J. W.-s.	85 Howell, J. H.-g.	White, W. C.-s.
Smith, C. M.-s.	Carr, L.-s.	Cahoon, F.-s.
Standish, J.-s.	Saunders, R. M.-s.	99 Wells, W.-g.
Wagner, W. J.-s.	Hoople, H. N.-s.	Hargrave, H. G.-s.
Burt, W.-s.	86 Peters, G. A.-g.	Piersol, W. H.-s.
70 Williams, A. D.-s.	Noecker, C. T.-s.	Gow, J.-s.
71 Forrest, W.-g.	Johnston, D. R.-s.	00 P. L. Scott,
Moore, C. Y.-s.	87 Ego, A.-g.	Bell, C. C. Æq-g.
Henning, N. P.-s.	88 Féré, G. A.-g.	Howland, G. W.
Delamater, R. H.-s.	Galloway, J.-s.	Revell, E. D. Æq-s.
72 Zimmerman, R.-g.	89 Chambers, G.-g.	Carder, E. D.-s.
Crozier, J. B.-s.	Collins, J. H.-s.	01 Clarkson, F. A.-g.

Year.	Year.	Year.
01 McIlwraith, D. G.-s.	05 Merritt, W.-s.	10 Butterfield, R. M.-s.
Cleland, F. A.-s.	Gowland, M. E.-s.	Barker, P. W.-s.
Carswell, W. A.	06 McNeill, H. M.-g.	11 Livingstone, J. M.-g.
Cohoe, B. A. Æq-s.	Holbrook, J. H.-s.	Eagles, A. S.-s.
02 Roaf, H. E.	Dickson, E. C.-s.	Bouck, C.
Saunders, W. P.	Moorhead, A. S.-s.	Christie, N. A. Æq-s.
Æq-g.	07 Gray, G. C.-g.	Campbell, J. G. A.-s.
Fletcher, G. W.-s.	McVicar, C. S.-s.	12 McClenahan, R. R.
Moir, A.-s.	Schinbein, A. B.-s.	McPhedran, F. M.,
Archer, A. E.-s.	Cannon, O.-s.	Æq-g.
03 Oille, J. A.-g.	08 Richards, G. E.-g.	Breslin, L. J.-s.
Phillips, J.-s.	Robertson, W. A.-s.	Wellman, A. L.-s.
Yin, S. C.-s.	Buswell, R.-s.	13 Scott, W. A.
Wilson, G. E.-s.	Harkness, J. G.-s.	Fletcher, A. A. Æq-g.
04 McCollough, R. J. P.-s.	09 Parker, C. B.-g.	Simon, K. M. B.-s.
Kinghorn, A.-s.	Tytler, W. H.-s.	Wookey, H. W.-s.
Anderson, R. W.-s.	Marcy, W. J. M.-s.	Brown, C. P.-g.
Walker, S. B.-s.	Brown, A. G.-s.	Irwin, O. M.-s.
05 Lemon, W. S.-g.	10 Watt, J. C.-g.	Brodey, A.-s.
Ford, G.-s.	Follett, J. V.-s.	Darby, G. E.-s.

### Starr Medallists.

Year.	Year.	Year.
67 Palmer, R. N.	74 Brown, O. C.-g.	81 Duncan, J. H.-g.
68 Hunt, R. H.	Farwell, A.-s.	82 Wallace, R. R.-g.
Brown, J. P.	Campbell, A. J.-s.	83 Robinson, W. J.-g.
Cassidy, J. J.	75 Britton, W.-g.	86 Peters, G. A.-g.
69 Graham, J. E.	White, J.-s.	89 Collins, J. H.-g.
70 Burgess, T. J. W.-g.	Bennett, J. H.-s.	Chambers, G.-s.
Greenless, A.-s.	76 Lackner, H. G.-g.	90 Barker, L. F.-g.
Wagner, W. J.-s.	McPhedran, A.-s.	91 Barnhardt, W. N.-g.
71 Moore, C. Y.-g.	Bowerman, A. C.-s.	92 Middlebro, T. H.-g.
Henning, N. P.-s.	77 Stuart, W. T.-g.	Bruce, H. A.-s.
Forrest, W.-s.	78 Bonnar, J. D.-g.	96 McKay, T. W. G.
72 Zimmerman, R.-g.	Meek, H.-s.	Rannie, J. A.
Crozier, J. B.-s.	Griffin, H. S.-s.	99 Hill, H. W.
73 Meldrum, N. W.-g.	79 Burt, F.-g.	03 McCrae, T.
Close, J. A.-s.	80 Cross, W. J.-g.	08 Harvey, W. H.-g.
Hagel, S. D.-s.	Bryce, P. H.-g.	

## WINNERS OF FACULTY MEDALS AND SCHOLARSHIPS FOR 1913.

### Five Years' Course.

Faculty Gold Medal.....	( W. A. Scott,
First Faculty Silver Medal.....	A. A. Fletcher.
Second Faculty Silver Medal.....	K. M. B. Simon.
	H. W. Wookey.

### Four Years' Course.

Faculty Gold Medal.....	C. P. Brown.
First Faculty Silver Medal.....	O. M. Irwin.
Second Faculty Silver Medal.....	A. Brodey.
Third Faculty Silver Medal.....	G. E. Darby



**SCHOLARSHIPS.**

First Year.....	{ 1. B. S. Cornell, 2. A. M. Jeffrey.
Second Year.....	{ 1. H. B. Maitland, 2. F. M. Johnson.

**POST-GRADUATE SCHOLARSHIPS.**

The George Brown Memorial Scholarship in Medical Science: A. Brodey, C. P. Brown, G. E. Darby, A. A. Fletcher, L. M. Rice, H. P. Robinson, K. M. B. Simon, F. M. Walker, H. W. Wookey.

**CHAPPELL PRIZE IN CLINICAL SURGERY.**

A. A. Fletcher.

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**FACULTY OF APPLIED SCIENCE  
AND ENGINEERING.**

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**FACULTY OF APPLIED SCIENCE AND ENGINEERING.****Historical Sketch.**

The Legislative Assembly during the Session of 1877 gave its sanction to the establishment of a School of Practical Science on the basis proposed in the memorandum of the Minister of Education confirmed by the Lieutenant-Governor in Council on the 3rd day of February, 1877.

By the scheme thus approved of, Government effected an arrangement with the Council of University College whereby the students of the School of Practical Science enjoyed full advantage of the instruction given by its professors and lecturers in all the departments of science which were embraced in the work of the School.

This arrangement was brought to an end in 1889 by the transfer of the department of science above referred to, from University College to the University of Toronto under the operation of the University Federation Act.

In order that the students of the School might continue to enjoy the advantage of the instruction of the above departments, the Senate of the University of Toronto passed a Statute in October, 1889, affiliating the School to the University, which Statute was confirmed by the Lieutenant-Governor on the 30th day of October, 1889.

By an Order-in-Council, approved by the Lieutenant-Governor, on the 6th day of November, 1889, a Principal was appointed, and the management of the School was entrusted to a council composed of the Principal as chairman, and the Professors, Lecturers and Demonstrators appointed on the Teaching Faculty of the School.

By the terms of this order the management and discipline of the School was vested in the Council.

By a Statute of the Senate of the University of Toronto, passed on December 14th, 1900, the teaching staff and examiners of the School of Practical Science, together with the examiners for the degree of B.A.Sc., and professional degrees in Engineering, were constituted ex-officio the Faculty of Applied Science and Engineering of the University of Toronto.

By an Order-in-Council dated the 30th day of January, 1903, the Council of the School was made to consist of the Principal, the Professors and Lecturers, together with the Registrar.

By the University Act, 1906, the School of Practical Science was united to the University of Toronto as its Faculty of Applied Science and Engineering.

**GRADUATING DEPARTMENTS.**

There are eight regular Departments of Instruction leading to the degree of Bachelor of Applied Science:—

1. Civil Engineering.
2. Mining Engineering.
3. Mechanical Engineering.
4. Architecture.
5. Analytical and Applied Chemistry.
6. Chemical Engineering.
7. Electrical Engineering.
8. Metallurgical Engineering.

The instruction given in these departments extends over a period of four years and is designed to give the student a thorough knowledge of the scientific principles underlying the practice in the several professions, and also such training as may make him immediately useful when he commences professional work.

**DEGREE OF MASTER OF APPLIED SCIENCE (M.A.Sc.).**

(For requirements, see page 74.)

**PROFESSIONAL DEGREES.**

Bachelors of Applied Science may, after three years spent in professional work, present themselves for the degrees of Civil Engineer (C.E.), Mining Engineer (M.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), Chemical Engineer (Chem. E.), as the case may be, subject to the rules and regulations established by the University. (See page 74.)

**FELLOWSHIPS.**

Fellowships of the value of \$500 each, open to graduates, are offered annually in the various departments.

Applications for these fellowships are to be made annually in writing to the Secretary of the Faculty on or before the 1st day of May.

**SCHOLARSHIPS.**

The Boiler Inspection and Insurance Company of Canada offers a Scholarship in the Department of Mechanical Engineering of the value of \$130.00 to the student who obtains highest Honour Standing in the regular examinations of the third year.

The successful candidate will be expected to proceed to his fourth year during the session next following the date of the award.

The amount of the award will be credited by the Bursar to the fees of the fourth year of the successful candidate.

### Research Fellowship.

Two research Fellowships of the value of \$500 each are offered annually by the Alumni Association of the Faculty of Applied Science and Engineering.

### I. MATRICULATION.

1. The matriculation requirements of this Faculty are based upon those given in the curriculum for Junior Matriculation, a copy of which may be obtained on application.

2. A candidate for matriculation must produce satisfactory certificates of good character.

3. The subjects are as follows:

English, History, any three of the following, viz., Greek, Latin, French, German, Experimental Science, with pass standing in Honour Mathematics.

In selecting the options it is recommended that students take French, German and Experimental Science. In the department of Architecture French is required, in Applied Chemistry and Chemical Engineering German is required, and in Mechanical Engineering it is desirable that students take German.

4. The pass standard is forty per cent. of the marks assigned to a paper, with an average of sixty per cent.

5. A candidate who has obtained an average of sixty per cent. on all the papers but has failed to obtain forty per cent. in not more than two papers may complete matriculation by passing on these papers at any one subsequent examination.

6. A candidate who has obtained forty per cent. on each of at least eight papers, with an average of sixty per cent. on the same, will be credited with these papers. In order to complete his Matriculation, he must obtain at one subsequent examination forty per cent. on each of the remaining papers, with an average of sixty per cent.

7. The examination for pass and honour Junior Matriculation is held annually in June at centres in Ontario, and, if application is made to the Senate, the examination may, with the co-operation of the Department of Education, be held at centres outside Ontario.

8. Applications accompanied by the fee of \$5.00 must be sent not later than the 15th of May to the local Public School Inspector, or in the case of candidates intending to write at the University, to the Registrar.

9. A Junior Matriculation examination, at which no honour papers are set, will be held in September at the University and at such other centres as may from time to time be authorized. Candidates entitled to the privileges of supplemental examinations, as well as new candidates, may present themselves at this examinations.

10. Applications to write on the September examination, together with the necessary fee, must be received at the Department of Education not



later than September 1, for those who wish to write at any centre established in Ontario, and not later than August 1 for any centre elsewhere in Canada.

11. Forms of application, the time-table of the September examination, and further particulars may be had upon application to the Department of Education.

## II. ADMISSION.

A candidate for admission must have completed the seventeenth year of his age on or before the first of October of the year in which he seeks to enter.

Applications for admission must be made on blank forms supplied by the Registrar, and should be forwarded early in September.

Applications will be considered from (a) those who have completed matriculation, including those who hold certificates recognized as equivalent—see matriculation curriculum—, (b) those who have failed in not more than two papers of the matriculation examination. The latter must complete matriculation before being eligible to enter the second year.

Applications based upon other certificates than those mentioned will be considered as occasion may require. Such certificates must be accompanied by an official statement of the marks in the various subjects upon which the certificate was granted.

### ADMISSION AD EUNDEM STATUM.

An undergraduate of another University may be admitted *ad eundem statum* on such conditions as the Senate on the recommendation of the Council of the Faculty may prescribe.

An applicant for admission *ad eundem statum* must submit with his petition (1) a calendar of his University giving a full statement of the courses of instruction; (2) an official certificate of character and academic standing.

## III. REGISTRATION.

Registration in the various years will begin Sept. 1st. Blank cards for the purpose will be supplied by the Secretary on request. (See "Dues and Deposits," next page.)

## IV. FEES.

All fees are payable at the Bursar's office between the hours 10 a.m. and 1 p.m. of each week day except Saturday.

The annual fees including tuition, library, laboratory supplies and one annual examination shall be as follows:

### First Year.

If paid in full on or before November 5th.....	\$100.00
By instalments:	
First instalment, if paid on or before November 5th.....	50.00
Second instalment, if paid on or before February 5th.....	55.00

**Second Year.**

If paid in full on or before November 5th..... \$110.00

By instalments:

First instalment, if paid on or before November 5th..... 55.00

Second instalment, if paid on or before February 5th..... 60.00

**Third and Fourth Years.**

If paid in full on or before November 5th..... \$120.00

By instalments:

First instalment, if paid on or before November 5th..... 60.00

Second instalment, if paid on or before February 5th..... 65.00

**Repeating the Year.**

If paid in full on or before November 5th..... \$50.00

The above fees are payable in advance. After November 5th a penalty of \$1.00 per month will be imposed until the whole amount is paid. In the case of payment by instalments the same rule as to penalty will apply.

Students desiring to pay in instalments must have paid the fees due in the first term before proceeding to the work of the second term.

**General Fees.**

Matriculation, or registration of Matriculation..... \$5.00

Supplemental examination..... 10.00

Admission *ad eundem statum*..... 10.00

Degree of B.A.Sc. (payable not later than April 1st)..... 10.00

**Dues and Deposits.**

(Payable to the Secretary of the Faculty at the time of registration.)

Engineering Society membership..... \$2.00

Annual deposit..... 2.00

Charges for waste, neglect and breakage are to be met out of the deposit fee, the balance of which will be refunded to the student at the end of the session.

**Students' Council Fee.**

The Annual Fee..... \$1.00

Every male student in attendance, proceeding to the Degree of Bachelor of Applied Science and Engineering, is required to pay to the Bursar, at the time of the entry of his name with the Secretary, the Annual Fee of one dollar, for the maintenance of the Council of the Undergraduates.

**GENERAL INFORMATION FOR STUDENTS.**

The Council of University College and the governing bodies of the federated universities and colleges, respectively, have disciplinary jurisdiction over and entire responsibility for the conduct of their students in respect of all matters arising or occurring in or upon their respective college buildings and grounds, including residences.

The councils of such of the faculties as have assigned for their separate use any building or buildings and grounds, including residences, have disciplinary jurisdiction over and entire responsibility for the conduct of all students in their respective faculties in respect of all matters arising or occurring in or upon such building, or buildings and grounds.

In all such cases, and, save as aforesaid, as respects all students to whatsoever college or faculty they may belong, disciplinary jurisdiction is vested in the Caput, but the Caput may delegate its authority in any particular case or by any general regulation to the council or other governing body of the university or college or faculty to which the student belongs.

The Caput has also power and authority to determine by general regulations, or otherwise, to what college, faculty or other body the control of university associations belongs.

If there be any questions as to the proper body to exercise jurisdiction in any matter of discipline which may arise, the same shall be determined by the Caput, whose decision shall be final.

Disciplinary jurisdiction includes the power to impose fines.

### **REGULATIONS RESPECTING STUDENTS.**

No student will be enrolled in any year, or be allowed to continue in attendance, whose presence for any cause is deemed by the Council to be prejudicial to the interests of the University.

All interference on the part of any student with the personal liberty of another, by arresting him, or summoning him to appear before any tribunal of students, or otherwise subjecting him to any indignity or personal violence, is forbidden by the Council. In particular, students of all Faculties are warned against the practices known as the "hustling" of freshmen and against inter-year or inter-faculty "hustles". Any student convicted of participation in such proceedings will render himself liable to expulsion from the University.

Any student who may be convicted of having taken part in processions through the city, which have not been authorized by the police authorities after application by the Executive of the Students' Council, will be severely disciplined.

All students shall be in attendance during the whole of each term. Those whose attendance or work is reported as unsatisfactory are liable to dismissal by the Council.

No student will be allowed to repeat the work of any year more than once.

Information as to the text-books, instruments and materials to be purchased by the students will be given on registration at the beginning of the session.

### **OPTIONS.**

In departments 1, 2, 3 and 7 of the first and second years, students have the option of taking either French or German. The selection made for the first year must be continued during the second year.

In Department 1 of the third year, in addition to the regular subjects, Biology will be required of those who intend to follow Sanitary work in the fourth year.

In department 5, second, year, an option is permitted between Biology and Calculus as the student, upon consultation with the head of the department in Chemistry, may decide.

In the fourth year, optional courses are arranged in certain departments. Students are required to submit their selection to the Secretary in writing, not later than September 15th. The proposed selection must be approved by Council before adoption.

## **REGULATIONS RESPECTING EXAMINATIONS.**

### **Regular Examinations.**

A student who in either term of the session fails to perform the work of his course in a manner satisfactory to the professors in charge, will not be allowed to present himself at the final examinations of the year.

Candidates are required to send to the Secretary of the Faculty at least three weeks before the commencement of the annual examinations in April, notice in writing of their intention to take such examinations. A penalty of \$1.00 will be imposed upon all candidates who fail to give notice within the proper time.

In the second, third and fourth years annual examinations will be held at the beginning of the second term on all subjects completed during the first term.

No student will be allowed to write at the annual examinations who has not paid all fees and dues for which he is liable.

The minimum percentage of marks required to pass in the written examination will be fixed from time to time by the Council.

The minimum percentage of marks required to pass in the practical work connected with any subject shall be one and one-half times the minimum required in the case of a written examination.

In order to pass the practical examinations in the subjects of applied mechanics, descriptive geometry, electrical design, optics, surveying and architecture, the drawings set in these subjects must be made.

Candidates who fail in passing the annual examinations will be required to take again the whole course of instruction, both theoretical and practical, of the year in which they fail before presenting themselves a second time for examination.

### **Term Examinations.**

In the first year only, term examinations in three subjects will be held on the last two days of the first term.

The subjects will not be announced until the day previous to the first examination.

The results of these examinations will be incorporated with those of the annual examinations in the same subjects in the ratio of 1 to 2.



### **Supplemental Examinations.**

A candidate who fails in one or two subjects at the Annual Examinations will be required to take supplemental examinations in such subjects.

The supplemental written examinations will begin on the 18th of September, 1914. Candidates are required to send to the Secretary of the Faculty not later than the first of September, notice in writing of their intention to take such examinations, and to remit to the Bursar the fee of \$10.00

In the case where a candidate fails to pass a supplemental examination it will count as one of the two supplemental examinations which may be allowed him after the next annual examination.

### **Vacation Work.**

Vacation work must be handed in on or before the first day of the session.

Vacation notes must be on construction only, except in Department 2 (see p. 74), and contain not less than twenty, nor more than thirty pages of sketches. These sketches must be freehand pencil drawings with figured dimensions.

Notes must be made in standard note books approved of by the Faculty, Notes which have been taken during the session in connection with the work in drawing will not count as vacation work.

The minimum percentage of marks required for practical work must be made in the case of vacation notes.

### **Shop Work.**

Students in Mechanical and Electrical Engineering are not considered as having completed their course of study, nor are degrees granted until certificates have been submitted to the Council, and accepted as satisfactory, showing not less than eight months of mechanical experience in production of some kind under commercial conditions. Preferably the work undertaken should be in one of the manufacturing industries or trades with which the Course is related.

It is not desirable that any student in these Courses should enter sales or other non-production departments of the engineering industries without having acquired some personal experience in mechanical production. It is best to obtain this experience under commercial conditions. Otherwise one can not at all appreciate shop conditions and limitations.

### **Honours.**

Honours will be granted in each department to the students who pass in all the subjects and obtain at least 66 per cent. of the total number of marks allotted to the department at the annual examinations.

Papers read before the Engineering Society may be considered in granting Honours.



### REGULATIONS RESPECTING TERM WORK.

Students working in any laboratory must be governed by the regulations relating thereto as made known from time to time.

No laboratory reports or drawings may be removed from the laboratories without permission. The Council reserves the right to dispose of them as may be thought proper.

#### Field Work.

No field notes will be counted which have not been taken in the field and during the hours allotted to such work.

Students taking practical astronomy are required to take observations in the field for time, latitude, and azimuth.

#### Drafting Rooms.

Drawings prescribed for the first term of the session will not be counted unless finished in that term.

The minimum number of drawings in first and second years shall be twenty-five, and the maximum number thirty-five, except in the Department of Analytical and Applied Chemistry, in which the number shall be fifteen and twenty-five respectively.

No drawings will be counted which have not been made in the drafting rooms, and during the hours allotted to such work.

#### Theses.

In the Fourth Year each student is required to prepare a thesis on a subject approved by the Council. The title of the thesis must be sent to the Secretary of the Faculty for approval on or before November 1st, and the completed thesis must be handed in not later than the first day of the second term and shall become the property of the University. The rules governing size, form, etc., may be obtained on application to the Secretary.

### EXEMPTIONS.

Applications for exemption from any of the regulations must be made to the Council in writing and the particulars of the case fully stated.

# DEPARTMENT OF CIVIL ENGINEERING.

The courses of study in Civil Engineering are designed to give the student a sound training in the fundamental scientific principles on which the practice of the profession is based. The instruction is given by means of lectures and practical work in the field, the drafting room and the laboratory. In this way the student is led to apply the principles developed in the class room.

## SUBJECTS OF INSTRUCTION.

### Civil Engineering—First Year.

Subject	No.	Hours per week.			
		First Term.		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Algebra.....	187	2		2	
Plane Trigonometry.....	189	2			
Analytical Geometry.....	188	1		1	
Descriptive Geometry.....	115	1		1	
Surveying.....	205, 206	1	9	1	
Statics.....	10	2		2	
Dynamics.....	11	2		2	
Elementary Chemistry.....	75	2		2	
Modern Language.....	217, 218	1		1	
Accounts.....	65	1		1	
Drawing.....	117		13		22

### Second Year.

Vacation Work.....	220				
Calculus.....	190	2		2	
Spherical Trigonometry.....	191	1			
Elementary Astronomy.....	55	1		1	
Descriptive Geometry.....	121	1		1	
Surveying.....	207, 208	1	9	1	
Dynamics.....	12	1		1	
Strength of Materials.....	13	2		2	
Optics.....	197	1	1½		
Hydrostatics.....	196			1	1½
Engineering Chemistry.....	85			1	
Organic Chemistry.....	87	1			
Mineralogy.....	159, 161	2	1		2
Banking and Finance.....	66	1		1	
Modern Language.....	217, 218	1		1	
Drawing.....	123		12		16
Chemical Laboratory.....	81				6

## Third Year.

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y
Vacation Work.....	220				
Least Squares.....	192			1	
Practical Astronomy and Geodesy.....	56, 57	2		2	
Surveying and Levelling....	209, 210	1	9	1	
Descriptive Geometry.....	127	1			
Hydraulics.....	29, 30	2		2	3
Photography.....	199	1	1½		1½
Ferro-Metallurgy.....	181	1		1	
Theory of Structures.....	18	2		2	
Cements and Concrete.....	21			1	
Engineering Chemistry....	94	1		1	
Geology.....	150	1		1	
Limited Companies.....	67	1		1	
Heat.....	198	1	1½		
*Biology.....	61	2		2	
Strength of Materials.....	14				1
Drawing.....	128		8		19

## Fourth Year.

†Foundations.....	20	1	1	1	1
Electricity.....	140	1		1	
†Thermodynamics.....	34, 39a	1	1	1	1
Geology.....	151	1		1	
Contracts and Specifications	68			1	
Thesis.....	219				
And one of					
(a) { Astronomy.....	58, 59	2	23	2	
{ Geodesy.....	60	2		2	23
(b) { Sanitary Engineer-					
ing.....	213	1½	16	1½	16
(b) { Highway Engineer-					
ing.....	214	1½	6	1½	6
(c) Structural Engineer-					
ing.....	215	6	22	7	22
or two of					
(d) Hydraulics.....	31, 32	3	10	3	10
(e) Strength and Elas-					
ticity of Materials..	16, 17, 22, 23	3½	11	3½	11
(f) Railway Engineering..	211, 212	1½	11	1½	11

\* Required only of those who propose to take Sanitary Engineering in the Fourth Year.

† Not required of those taking the Astronomy option.

## 2. DEPARTMENT OF MINING ENGINEERING.

The course in Mining Engineering is intended to serve as a preliminary training for those who expect to practise the art of mining or metallurgy. In the first two years it differs very little from the course in civil engineering, in the third year some subjects peculiar to mining and metallurgy are taken up.

In general this course is designed to first give the student a good training in the parts of engineering essential to all branches, such as surveying, drafting, etc., and then in the upper years to allow him to follow studies peculiar to mining engineering.

Candidates for the degree in this department will be required to present satisfactory evidence of having had at least six months' practical experience in work connected with mining, metallurgy or geology, for which they must have received regular wages. Certificate forms, giving full details as to acceptable classes of work, will be furnished on application, and should be obtained by all students before entering employment.

## SUBJECTS OF INSTRUCTION.

## First Year.

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Algebra.....	187	2		2	
Plane Trigonometry.....	189	2			
Analytical Geometry.....	188	1		1	
Descriptive Geometry.....	115	1		1	
Surveying.....	205, 206	1	9	1	
Statics.....	10	2		2	
Dynamics.....	11	2		2	
Elementary Chemistry.....	75	2		2	
Modern Languages.....	217, 218	1		1	
Accounts.....	65	1		1	
Drawing.....	117		13		19
Chemical Laboratory.....	76				3

## Second Year.

Vacation Work.....	220				
Calculus.....	190	2		2	
Descriptive Geometry.....	121	1		1	
Surveying.....	207, 208	1	9	1	
Dynamics.....	12	1		1	
Strength of Materials.....	13	2		2	
Optics.....	197	1	2		
Hydrostatics.....	196			1	1
Inorganic Chemistry.....	79	1			
Organic Chemistry.....	87	1			
Engineering Chemistry.....	85			1	
Mineralogy.....	157, 160	2	1		3
Geology.....	150	1		1	
Mining.....	170, 171			1	3
Metallurgy.....	183	1			
Modern Languages.....	217, 218	1		1	
Banking and Finance.....	66	1		1	
Drawing.....	123		7		7
Chemical Laboratory.....	81, 82		3		9



**Mining Engineering—Third Year.**

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Vacation Work.....	220				
Surveying and Levelling....	209, 210	1	9		
Theory of Structures.....	19	2			
Hydraulics.....	29a	2		2	
Electricity.....	140	1		1	
Engineering Chemistry.....	94	1		1	
Analytical Chemistry.....	80	1		1	
Assaying.....	173		3	1	3
Petrography.....	163	1		1	
Mineralogy.....	164		2		2
Economic Geology.....	151, 156	2		2	2
Ore Deposits.....	155	1		1	
Mining.....	172	1	3	1	
Ore Dressing.....	177	1		1	
Ferro-Metallurgy.....	181	1		1	
Metallurgy.....	184	1		1	
Limited Companies.....	67	1		1	
Drawing.....	132		3		5
Chemical Laboratory.....	93				9½

**Fourth Year.**

Thermodynamics.....	34	1		1	
Electrochemistry.....		2			
Assaying.....	174			1	3
Petrography.....	165, 166	1	2	1	2
Geology, Archaean and Glacial.....	152	2	1	2	
Geology, Mining.....	153	1		1	
Mining.....	175	1		1	
Ore Dressing.....	179	1		1	
Metallurgy.....	180, 182	1		1	6
Cost-keeping, etc.....	69	1		1	
Milling.....	176				6
Power.....	32a, 39a, 141		3		3
Design.....	215		3		3
Chemical Laboratory.....	112		12		
Thesis.....	219		7		2

### 3. DEPARTMENT OF MECHANICAL ENGINEERING.

The course in this Department is designed to meet the needs of those students who are intending to take up the work connected with Mechanical Engineering, such as the design of gas engines, steam engines, steam boilers, steam turbines, air compressors, etc.; the design and installation of the machinery connected with power plants and central stations, steam piping and other similar problems. The work is also so arranged that the student becomes somewhat familiar with the design of travelling cranes and mill buildings and similar problems connected with structural steel work.

Since the work of the mechanical engineer and of the electrical engineer is closely allied, the courses in these two departments in the first two years are identical and cover the subjects mentioned below.

In the third year the work becomes more specialized, the mechanical engineers paying more attention to heat engines of various types, and to mill building design and other work of similar nature. The study of electricity is continued and the student gets considerable practice in the mechanical and electrical laboratories.

In the fourth year the student devotes himself still more closely to his chosen work, placing the greater stress on thermodynamics and the theory and testing of heat engines, and problems in machine design. Much time is spent in the mechanical laboratories testing gas and steam engines and other machines.

Candidates for the degree in this department are required to present satisfactory evidence of having had at least eight months' practical experience in one of the principal trades connected with Mechanical Engineering, the object being that graduates may have some practical knowledge of the duties of the workman in this branch of engineering, as distinguished from those of the purely technical man. Certificate forms will be furnished on application. These forms contain full details in regard to the work required.

**SUBJECTS OF INSTRUCTION.**

**Mechanical Engineering—First Year.**

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Algebra.....	187	2		2	
Plane Trigonometry.....	189	2			
Analytical Geometry.....	188	1		1	
Descriptive Geometry.....	115	1		1	
Statics.....	10	2		2	
Dynamics.....	11	2		2	
Magnetism and Electricity.	135	2			
Electric Circuits.....	136			2	
Elementary Chemistry.....	75	2		2	
Drawing.....	120		20		20
Electricity.....	137		1½		1½
Modern Language.....	217, 218	1		1	
Accounts.....	65	1		1	

**Second Year.**

Vacation Work.....	220				
Calculus.....	190	2		2	
Descriptive Geometry.....	121	1		1	
Dynamics.....	12	1		1	
Theory of Mechanism.....	25	2		2	
Steam Engines.....	38	1			
Strength of Materials.....	13	2		2	
Optics.....	197	1	1½		
Hydrostatics.....	196			1	1½
Electricity.....	138, 139	2	2½	2	2½
Engineering Chemistry.....	85			1	
Organic Chemistry.....	87	1			
Banking and Finance.....	66	1		1	
Modern Language.....	217, 218	1		1	
Drawing.....	123		12		19
Chemical Laboratory...	81		6		

## Third Year.

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Vacation Work.....	220				
Mechanics of Machinery...	26	1		1	
Machine Design.....	27	1	7½	1	7½
Thermodynamics.....	33, 35	2	2	2	3
Heat Engines.....	39	1		1	
Hydraulics.....	29, 30	2	1	2	
Theory of Structures.....	19	2			
Ferro-Metallurgy.....	181	1		1	
Magnetism and Electricity.	142	3	4½	1	4½
Alternating Current.....	143	1		1	
Engineering Chemistry....	94	1		1	
Limited Companies.....	67	1		1	
Strength of Materials.....	15		2		
Drawing.....	132		3		3

## Fourth Year.

Mill Building Design.....	24	1	3	1	3
Cost-keeping, etc.....	69	1		1	
Machine Design.....	28	1	4	1	4
Thesis.....	219				
And two of					
(d) Hydraulics.....	31, 32	3	9	3	9
(e) Strength of Materials	16, 17, 22, 23	3½	10	3½	10
(g) Thermodynamics....	36, 37	3	10	3	10

#### 4. DEPARTMENT OF ARCHITECTURE

The instruction in this department is arranged to lay a broad foundation for the subsequent professional life of its graduates, and incidentally to prepare its students to be immediately useful in an architect's office. The curriculum has been arranged to meet the aesthetic and scientific needs of the profession, and includes History and Principles of Architecture, Free-hand Drawing in pencil, ink and color, Modelling, Architectural Design, Analysis and Criticism of Buildings, Mathematics, Statics, Strength and Elasticity of Materials, Theory of Construction and Heating and Ventilation.

The equipment of the department includes a working library of 1,000 volumes, a large file of periodicals, 2,500 photographs, 2,000 stereographic photos, 4,500 lantern slides, and a large collection of models and casts.

#### SUBJECTS OF INSTRUCTION.

##### First Year.

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Algebra.....	187	1		1	
Plane Trigonometry.....	189	2			
Analytical Geometry.....	188	1		1	
Descriptive Geometry.....	115	1		1	
Building Measurement.....	52	1	9	1	
Statics.....	10	2		2	
Elementary Chemistry....	75	2		2	
History and Principles of Architecture.....	40	1		1	
French.....	217	1		1	
Accounts.....	65	1		1	
Drawing.....	118		12		21
Freehand Drawing.....	49		2		2
Modelling.....	50		2		2

##### Second Year.

Vacation Work.....	220				
Calculus.....	190	2		2	
Descriptive Geometry.....	121	1		1	
Strength of Materials.....	13	2		2	
Engineering Chemistry.....	94	1		1	



## Second Year—Continued.

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Optics.....	197	1	1½		
Hydrostatics.....	196			1	1½
Architectural Design.....	46	1		1	
History of Architecture....	41	1		1	
Orders of Architecture.....	45	1		1	
History of Ornament.....	43	1		1	
French.....	217	1		1	
Banking and Finance.....	66	1		1	
Drawing					
Architectural Design }....	125		20		20
Freehand Drawing.. }	49a		2		2
Modelling.....	50a		2		2

## Third Year.

Vacation Work.....	220				
Descriptive Geometry.....	131	1		1	
Acoustics.....	195	1	3	1	
History of Architecture....	42	1		1	
History and Principles of Ornament.....	44	1		1	
Architectural Design.....	47	1		1	
Building Materials.....	53	2		2	
Theory of Structures.....	19	2			
Cements and Concrete.....	21			1	
Limited Companies.....	67	1		1	
Strength of Materials.....	15		1		1
Photography.....	199	1	1½		1½
Modelling.....	50b		2		2
Water Color Painting.....	49b		2		2
Drawing	130		16		22
Architectural Design }					

## Fourth Year.

Strength of Materials.....	17		6		6
Electricity.....	146	1		1	
Heating and Ventilation....	53	1		1	
Sanitary Science.....	52	1		1	
Contracts and Specifications	68			1	
Thesis.....	219		3		3
Drawing from life.....	49c		2		2
Modelling from life.....	50c		2		2
And one of					
(l) Architectural Design.	48	2	20	2	20
(m) Architectural Engi- neering.....	216	4	22	3	26

**5. DEPARTMENT OF ANALYTICAL AND APPLIED CHEMISTRY.**

The course in Analytical and Applied Chemistry is designed to furnish instruction suitable for those students who intend to practise chemistry as a profession, either as analysts or as works chemists.

**SUBJECTS OF INSTRUCTION.****First Year.**

Subject	No.	Hours per week			
		First Term		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Algebra.....	187	2		2	
Plane Trigonometry.....	189	2			
Analytical Geometry.....	188	1		1	
Electricity and Magnetism.....	135	1		1	
Biology.....	61, 62	2	3	2	3
Accounts.....	65	1		1	
Electric Circuits.....	136	1		1	
Elementary Chemistry.....	75	2		2	
Elementary Mineralogy.....	157	2			
Inorganic Chemistry.....	77	1		1	
German.....	218	1		1	
Drawing.....	119		4		4
Electricity.....	137		1		
Chemical Laboratory.....	78		10		14
Mineralogy.....	158		4		3

**Second Year.**

Electricity.....	138, 139	2	2½		2½
Engineering Chemistry.....	85			1	
Industrial Chemistry.....	86	1		1	
Organic Chemistry.....	88	2		2	
Physical Chemistry.....	90	2		2	
Inorganic Chemistry.....	79	1			
Analytical Chemistry.....	80	1		1	
Optics.....	197	1	1½		
Hydrostatics.....	196			1	1½
Geology.....	150	1		1	
*Biology or { .....	63	1	3	1	3
Calculus { .....	190	2		2	
German.....	218	1		1	
Banking and Finance.....	66	1		1	
Chemical Laboratory.....	89		15		16
Metallurgy.....	183			1	
Mineralogy.....	162				1

\* Students should consult the head of the Department of Chemistry as to the option to be selected.

## Third Year.

Subject	No.	Hours per week.			
		First Term.		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Electrochemistry.....	101, 102	2	3		
Engineering Chemistry....	94	1		1	
Industrial Chemistry.....	95	1		1	
Organic Chemistry A.....	97	2		2	
Organic Chemistry B.....	98			1	
Chemical Plant.....	96	1		1	
Ferro-Metallurgy.....	181	1		1	
Metallurgy.....	184	1		1	
Economic Geology.....	151	2		2	
Crystallography.....	167	1		1	
Limited Companies.....	67	1		1	
German.....	218	1		1	
Chemical Laboratory.....	91		16		20
Assaying.....	173		1½		1½
Heat.....	198	1	1½		
Electricity.....	140			1	

## Fourth Year.

Inorganic Chemistry.....	103	1		1	
Organic Chemistry.....	104	1		1	
Cost-keeping, etc...	69	1		1	
German.....	218	1		1	
Thesis.....	219				
And one of					
(h) Electrochemistry.....	108, 109	2	28	2	28
(i) Industrial Chemistry.	106, 107	1	29	1	29
(j) Sanitary and Forensic Chemistry and Bac- teriology.....	64, 110, 112	1	29	2	29
(k) Metallurgy.....	180	2	28		28

**6. DEPARTMENT OF CHEMICAL ENGINEERING.**

In many industries there is a demand for a man who combines the technical knowledge of the mechanical engineer with a knowledge of chemistry. It is to fill this want that the course in Chemical Engineering is designed.

**SUBJECTS OF INSTRUCTION.****First Year.**

Subject	No.	Hours per week.			
		First Term.		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Algebra.....	187	2		2	
Plane Trigonometry.....	189	2			
Analytical Geometry.....	188	1		1	
Descriptive Geometry.....	115	1		1	
Statics.....	10	2		2	
Dynamics.....	11	2		2	
Electric Circuits.....	136			2	
Elementary Chemistry.....	75	2		2	
Inorganic Chemistry.....	77	1		1	
German.....	218	1		1	
Accounts.....	5	1		1	
Drawing.....	120		17		19
Electricity.....	137		1½		1½
Chemical Laboratory.....	76				3

**Second Year.**

Vacation Work.....	220				
Calculus.....	190	2		2	
Strength of Materials.....	13	2		2	
Electricity.....	138, 139	2	2½	2	2½
Engineering Chemistry.....	85			1	
Industrial Chemistry.....	86	1		1	
Organic Chemistry.....	88	2		2	
Physical Chemistry.....	90	2		2	
Inorganic Chemistry.....	79	1			
Optics.....	197	1	1½		
Hydrostatics.....	196			1	1½
German.....	218	1		1	
Banking and Finance.....	66	1		1	
Drawing.....	123		13		14
Chemical Laboratory.....	84		6		6
Metallurgy.....	183			1	

## Third Year.

Subject	No.	Hours per week.			
		First Term		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Vacation Work.....	220				
Theory of Structures.....	19	2			
Thermodynamics.....	33 35	2		2	3
Electrochemistry.....	101, 102	2	3		
Engineering Chemistry....	94	1		1	
Organic Chemistry A.....	97	2		2	
Organic Chemistry B.....	98			1	
Industrial Chemistry.....	95	1		1	
Analytical Chemistry.....	80	1		1	
Metallurgy.....	184	1		1	
Ferro-Metallurgy.....	181	1		1	
Chemical Plant.....	96	1		1	
Limited Companies.....	67	1		1	
German.....	218	1		1	
Machine Design.....	27	1	4½	1	4½
Assaying.....	173		1½		1½
Electricity.....	140			1	
Drawing.....	132		3		
Chemical Laboratory.....	92		8		13

## Fourth Year.

Hydraulics.....	29a	2		2	
Inorganic Chemistry.....	103	1		1	
Organic Chemistry.....	104	1		1	
Cost-keeping, etc.....	69	1		1	
Power.....	32a, 39a, 141		3		3
German.....	218	1		1	
Thesis.....	219				
And one of					
(h) Electrochemistry.....	108	2		2	
(i) Industrial Chemistry.....	106, 107	1		1	
(j) Sanitary and Forensic Chemistry and Bac- teriology.....	64, 110, 112	1		2	
(k) Metallurgy.....	180	2	25		23



# 7. DEPARTMENT OF ELECTRICAL ENGINEERING.

The course in Electrical Engineering is arranged to provide preliminary training for those who would follow any of the various lines of activity connected with electrical industry.

The first two years of the course are devoted to fundamental scientific principles, and incidentally more or less of their application to engineering problems in mechanical, civil and electrical work. Many problems are solved in the drafting rooms by graphical methods. The third year includes further theoretical work, more particular attention being given to electrical and mechanical studies in theory, operation and design. The fourth year is devoted to advanced work in alternating current theory and practice combined with similar study in thermodynamics, hydraulics or electrochemistry.

A large amount of laboratory practice is provided, most of which belongs to the third and fourth years. In this last year most of the time is spent in laboratory investigations and studies resulting therefrom.

Candidates for the degree in this department will be required to present satisfactory evidence of having had at least eight months' mechanical experience in one of the principal trades connected with Electrical Engineering, the object being that graduates may have some practical knowledge of the duties of the workman in this branch of engineering as distinguished from those of the purely technical man. Certificate forms will be furnished on application. These forms contain full details in regard to the work required.

## SUBJECTS OF INSTRUCTION.

### First Year.

Subject	No.	Hours per week.			
		First Term.		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y
Algebra.....	187	2		2	
Plane Trigonometry.....	189	2			
Analytical Geometry.....	188	1		1	
Descriptive Geometry.....	115	1		1	
Statics.....	10	2		2	
Dynamics.....	11	2		2	
Magnetism and Electricity.	135	2			
Electric Circuits.....	136			2	
Elementary Chemistry.....	75	2		2	
Modern Language.....	217, 218	1		1	
Accounts.....	65	1		1	
Drawing.....	120		20		2
Electricity.....	137		1½		1½

**Second Year.**

Subject	No.	Hours per week.			
		First Term		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Vacation Work.....	220				
Calculus.....	90	2		2	
Descriptive Geometry.....	121	1		1	
Optics.....	197	1	1½		
Hydrostatics.....	196			1	1½
Dynamics.....	12	1		1	
Strength of Materials.....	13	2		2	
Theory of Mechanism.....	25	2		2	
Steam Engines.....	38	1			
Electricity.....	138, 139	2	2½	2	2½
Engineering Chemistry....	85			1	
Organic Chemistry.....	87	1			
Modern Language.....	217, 218	1		1	
Banking and Finance.....	66	1		1	
Drawing.....	124		12		19
Chemical Laboratory.....	81		6		

**Third Year.**

Vacation Work.....	220				
Mechanics of Machinery...	26	1		1	
Machine Design.....	27	1	3¼	1	3¼
Hydraulics.....	29, 30	2	1	2	
Thermodynamics.....	33, 35	2	2	2	1½
Heat Engines.....	39	1		1	
Electrochemistry.....	101, 102	2	3		
Magnetism and Electricity.	142	2		2	
Alternating Current.....	143	1		1	
Electrical Design.....	145	1	1½	1	3
Electrical Laboratory.....	144		6		6
Engineering Chemistry....	94	1		1	
Ferro-Metallurgy.....	181	1		1	
Limited Companies.....	67	1		1	

**Fourth Year.**

Applied Electricity.....	146, 147	3	18	3	18
Cost-keeping, etc.....	69	1		1	
Thesis.....	219				
And one of.....					
(d) Hydraulics.....	31, 32	3	10	3	10
(g) Thermodynamics....	36, 37	3	10	3	10
(h) Electrochemistry.....	108, 109	3	10	3	10

# 8. DEPARTMENT OF METALLURGICAL ENGINEERING.

The object of this course is to provide instruction and preliminary training for those who intend to become metallurgical engineers. Candidates for the degree in this department will be required to present satisfactory evidence of having had at least eight months' experience in metallurgical work.

## SUBJECTS OF INSTRUCTION.

### First Year.

Subject	No.	Hours per week.			
		First Term		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Algebra.....	187	2		2	
Plane Trigonometry.....	189	2			
Analytical Geometry.....	188	1		1	
Descriptive Geometry.....	115	1		1	
Statics.....	10	2		2	
Dynamics.....	11	2		2	
Inorganic Chemistry.....	75, 77	3		3	
Chemical Laboratory.....	78		9		9
Accounts.....	65	1		1	
Mineralogy.....	157, 168	2	1		1
Drawing.....	120		10		10

### Second Year.

Calculus.....	190	2		2	
Descriptive Geometry.....	121	1		1	
Dynamics.....	12	1		1	
Strength of Materials.....	13	2		2	
Hydrostatics.....	196			1	2
Electricity.....	140			1	
Steam Engines.....	38	1			
Magnetism and Electricity.....	135	2	3		
Inorganic Chemistry.....	79, 80, 85			2	
Banking and Finance.....	66	1		1	
Chemical Laboratory.....	83		6		6
Mineralogy.....	169		1		1
Mining.....	170, 171	1		1	2
Metallurgy.....	183, 185	1		2	2
Heat.....	198	1	2		
Spanish.....		1		1	
Drawing.....			7		7

**Third Year.**

Subject	No.	Hours per week.			
		First Term		Second Term	
		Lect.	Lab'y.	Lect.	Lab'y.
Theory of Mechanism.....	25	2		2	
Hydraulics.....	29a	2		2	
Theory of Structures.....	19	2			
Limited Companies.....	67	1		1	
Physical Chemistry.....	90, 93	2	5	2	5
Electrochemistry.....	101, 102	2	3		
Ferro-Metallurgy.....	181	1		1	
Cement and Concrete.....	21	1		1	
Assaying.....		1	3	1	5
Metallurgy.....	186	1	1	4	7
Ore Dressing.....	172, 177	1		1	3
Drawing.....			3		

**Fourth Year.**

Thermodynamics.....	34	1		1	
Heat Engines.....	39	1		1	
Ore Dressing.....		2	2	2	4
Assaying.....			4		
Costs.....		1		1	
Plant Design.....		1	4	1	4
Power.....	32a, 39a, 141		3		3
Metallurgy.....	186a	2	9	2	9
Thesis.....			4		4

## OUTLINE OF COURSES OF INSTRUCTION.

### APPLIED MECHANICS.

10. STATICS:—*T. R. Loudon.*

Departments 1, 2, 3, 4, 6, 7 and 8, I Year; 2 hours per week; both terms.

This course of lectures deals with forces in a single plane, and concerns chiefly the calculation of tension, compression and shearing stresses in frame structures and solid beams. It also deals with the consideration of problems relating to friction.

11. DYNAMICS:—*J. McGowan.*

Departments 1, 2, 3, 6, 7 and 8, I Year; 2 hours per week; both terms.

This course of lectures deals with bodies having motion of translation in one plane; also with relative motion, momentum, work and energy.

Text book:—Tutorial Dynamics—Briggs and Bryan.

12. DYNAMICS OF ROTATION:—*W. J. Loudon.*

Departments 1, 2, 3, 6, 7 and 8, II Year; 1 hour per week; both terms.

This course covers angular motion, including moments of inertia, simple harmonic motion, the pendulum, centres of mass, suspension and percussion, the simple theory of the fly-wheel and the governor.

Text book:—Dynamics of Rotation—Worthington.

13. STRENGTH OF MATERIALS:—*P. Gillespie.*

Departments 1, 2, 3, 4, 6, 7 and 8, II Year; 2 hours per week; both terms.

In this course the strength and elasticity of materials are mathematically treated. The stresses in such elements of structures as the tie rod, the beam, the strut and the member subjected to shear are investigated and the elementary principles of design established. In the lecture and drafting rooms through numerous problems involving the design of simple beams, columns, riveted connections, etc., these principles are exemplified. The work includes also the discussion of eccentric loading, suddenly applied loads and repeated stresses.

Reference Book:—Mechanics of Materials—Merriman.



14. STRENGTH AND ELASTICITY OF MATERIALS:—*J. McGowan.*

Departments 1, 3 and 4, III Year; 1 hour per week; one term.

This course is intended to give the student an introduction to the experimental study of the strength and elasticity of materials. It is intended that he shall acquire some familiarity with the construction and operation of testing machines and with the properties of the ordinary building materials.

Reference Book:—Laboratory Instructions, Department of Applied Mechanics, U. of T., 1913.

16. THEORY OF STRUCTURES:—*J. McGowan.*

Departments 1 and 3, IV Year; 2 hours per week; both terms.

The work taken up in this course of lectures consists in swing bridges, arches, suspension bridges and some special features in column construction. Some examples of the above structures will be designed in the class and carried out in further detail in the drafting room.

Reference Book:—Modern Framed Structures—Johnson.

17. STRENGTH AND ELASTICITY OF MATERIALS:—*P. Gillespie.*

Departments 1, 3 and 4, IV Year; a laboratory course of about 11 hours per week.

This course of experiments is intended to give the student practice in investigating the elastic and physical properties of iron, steel, concrete, timber and other building materials.

Reference book:—Materials of Construction—Johnson.

18. THEORY OF STRUCTURES:—*C. R. Young.*

Department 1, III Year; 2 hours per week; both terms.

The work of the first term comprises a thorough discussion of restrained, continuous and trussed beams, multiple beam and box girders, plate girders and certain practical aspects of column design. A number of designs of girders and structural details are worked out in the class and drafting rooms.

The second term is given chiefly to the design of a riveted truss highway span and a riveted truss railway span, the complete designs being made in the lecture and drafting rooms.

19. THEORY OF STRUCTURES:—*C. R. Young.*

Departments 2, 3, 4, 6 and 8, III Year; 2 hours per week; first term.

The work is practically the same as that for Department 1 in the first term except that a building plate girder is designed instead of a plate girder bridge span.

Text books:—Modern Framed Structures—Johnson, Bryan and Turneaure; Theory of Structures—Spofford; Bridge and Structural Design—Thomson; Aids in Structural Design—Young; Carnegie Pocket Companion; Cambria Steel.

20. FOUNDATIONS, RETAINING WALLS AND DAMS:—*P. Gillespie.*

Department 1, IV Year; 1 hour per week; both terms.

This course of lectures is devoted to the design of the structures mentioned. Preparatory to the discussion of the practical aspects of the subjects, and in order to gain familiarity with the fundamental principles involved, a part of the first term is given over to the consideration of the theory of compound stress. The most approved forms of construction of retaining walls, footings, abutments, piers and dams are then described, and typical designs are worked out in the class and drafting rooms.

Text books and books of reference:—Retaining Walls for Earth—M. A. Howe; Walls, Bins and Grain Elevators—M. S. Ketchum; A Treatise on Masonry Construction—I. O. Baker; Design and Construction of Dams—E. Wegmann.

21. CEMENTS AND CONCRETE:—*P. Gillespie.*

Departments 1, 4 and 8, III Year; 1 hour per week; second term.

The manufacture, testing and use of Portland Cement and the elementary theory of reinforced concrete are discussed in this course of lectures.

22. REINFORCED CONCRETE:—*P. Gillespie.*

Departments 1 and 4, IV Year; 1 hour per week.

The theory of the strength of reinforced concrete elements including the beam, the slab, the T-beam and the column, is continued in this course.

The analysis of the monolithic arch by the elastic theory is discussed, and the student is required in the drafting room to apply his knowledge to the design of simple structures.

Reference books:—Principles of Reinforced Concrete Construction—Turneure and Maurer; Concrete, Plain and Reinforced—Taylor and Thompson.

23. IRON AND STEEL:—*J. Galbraith, T. R. Loudon.*

Taken by students in IV Year, who select the options (c) Structural Engineering, and (e) Strength and Elasticity of Materials.

Metallography—Mechanical Treatment, Heat Treatment; Metallurgy; Physical Properties; 1 lecture per week. Laboratory, second term.

24. MILL BUILDING DESIGN:—*C. R. Young.*

Departments 1 (*Structural Engineering Option*), 3 and 4 (*Architectural Engineering Option*), IV Year; 1 hour per week; both terms.

The structural problems involved in the design of mill buildings of timber, steel and reinforced concrete are discussed in this course of lectures. Consideration is given to the various types of buildings, the conditions governing their choice and the details of construction in different materials. Designs of portions of mill buildings are worked out in the class and drafting rooms.

Text books:—Mill Buildings—Tyrrell; Steel Mill Buildings—Ketchum

**24a. MISCELLANEOUS STRUCTURES:—C. R. Young.**

Department 1 (*Structural Engineering Option* and *Sanitary and Highway Engineering Option*), IV Year; 1 hour per week, second term.

In this course of lectures the application of theoretical principles to the design of a variety of structures is made. Among those structures discussed are transmission line towers, elevated tanks and their supporting towers, standpipes, large pressure pipes, sewers, culverts, small highway bridges, sub-surface tanks and tall chimneys. Whenever possible the lecture work is followed up by designs in the drafting rooms.

### MACHINERY.

**25. THEORY OF MECHANISM:—M. B. Jackson.**

Departments 3, 7 and 8, II Year; 2 hours per week; both terms.

This course of lectures treats of the motions of machines, the latter being assumed to be of sufficient strength to resist acting forces. The formation of machines is dealt with in a general way and investigations of the velocities of points and links are made. The design of gear teeth and the application of trains of gears are taken up, also problems in static equilibrium.

Problems are worked out in the drafting room in which the methods given are employed.

Text book:—Theory of Machines—Angus.

**26. MECHANICS OF MACHINERY:—M. B. Jackson.**

Departments 3 and 7, III Year; 1 hour per week; both terms.

In this course the questions dealt with are the construction of acceleration diagrams, the determination of the accelerations of various parts of machines, the kinetic energy of machines, the effect of the weights and accelerations of parts on the velocity of the fly-wheel and the proper weight of the latter to fulfil given conditions. The theory of various forms of governors is also fully taken up and the efficiency of machines. The discussion of the design of slide valves and gears is continued in this course.

Text books:—Slide Valve Gears—Halsey; Theory of Machines—Angus.

27. MACHINE DESIGN:—*J. T. Lagergren.*

Departments 3, 6, 7, III Year; 1 hour per week; both terms.

The lectures in this course deal principally with the applications of the principles of kinematics and the theory of the strength of materials to the design of machine parts, such as shafting, gearing, journals, clutches, etc.

In addition to the lecture course time is spent in the drafting room where designs involving the above principles are worked out and the necessary calculations made. These designs are made as parts of some actual machine, such as an engine.

The laboratory work occupies  $7\frac{1}{2}$  hours per week for Department 3,  $4\frac{1}{2}$  hours for Department 6, and  $3\frac{1}{4}$  hours for Department 7.

28. MACHINE DESIGN:—*J. T. Lagergren.*

Department 3, IV Year; 4 hours per week.

The lectures and practical work in this course are meant to supplement those of Course 27, and deal with more difficult problems and designs. The design of a complete machine is taken up, and detail drawings as well as an assembly drawing are made.

### HYDRAULICS.

29. HYDRAULICS—GENERAL COURSE:—*J. J. Traill.*

Departments 1, 3 and 7, III Year; 2 hours per week.

This is an introductory course of lectures in hydraulics, and is devoted to the development and discussion of fundamental formulas relating to the flow of water in pipes, the measurement of discharge by various methods, such as orifices and weirs, the conditions of flow obtaining in open channels, artificial and natural, and in pipes flowing partially full, together with other kindred subjects.

The object of this course is to provide the student with a good working knowledge of the fundamental principle of hydraulics, such as is useful in practical work, and is necessary to the intelligent investigation of more advanced problems, such as the design of turbines, water-wheels and power plants generally.

29a. HYDRAULICS:—*J. J. Traill.*

Departments 2 and 8, III Year; Department 6, IV Year.

This course deals with the development and discussion of fundamental formulas relating to the flow of water in pipes, the measurement of water by various methods, the conditions of flow in open channels and in pipes partly full. This work is followed by a brief discussion on pumps and other hydraulic machines. The last-mentioned part of the course is supplemented by experimental work under the general title "Power".



30. HYDRAULIC LABORATORY:—*J. J. Traill.*

Department 1, III Year; 3 hours per week; one term. Departments 3 and 7, III Year; 3 periods of 3 hours each; first term.

The work in this course is intended to illustrate the lecture course given in Hydraulics and to give the student some working acquaintance with the formulas met with in practice. Experiments are made to determine the coefficients for an orifice and the coefficients of discharge for a weir. The results of these experiments are used in measuring the discharge in subsequent experiments on meters and for the determination of hydraulic resistances in various cases of flow in pipes.

31. HYDRAULICS:—*R. W. Angus, J. J. Traill.*

Departments 1, 3 and 7, IV Year; 3 hours per week; both terms.

Following up the third year course in this subject the theory already acquired is applied to the solution of problems connected with branched pipes, water-mains discharging at various points along their length, the effect of a dam on the water level at any point on a stream and numerous other problems.

The most important question considered and to which most of the lectures are devoted is the theory of turbines and centrifugal pumps, the effect of the design on the speed, discharge, power and efficiency being fully taken up.

Text books:—Hydraulic Motors, etc.—Bodmer; Centrifugal Pumps—Loewenstein and Crissey; Hydraulics—Merriman; Water-Power Engineering—Mead.

32. HYDRAULICS:—*R. W. Angus, J. J. Traill.*

Departments 1, 3 and 7, IV Year; about 10 hours per week.

A laboratory course devoted to experimental work on turbines of various types and centrifugal and turbine pumps and other similar devices. This experimental work is arranged to illustrate the lectures on turbine and pump design. The experiments are made on two large turbine pumps used in the laboratory supply, as well as on apparatus specially designed for instruction. Various methods of measuring water-power and the efficiency of machines are also given.

32a. POWER:—*J. J. Traill.*

Departments 2, 6 and 8, IV Year; 24 hours.

A laboratory course of experiments on orifices, weirs, turbines, meters, pumps, etc.



32b. **HYDRAULICS:**—*J. J. Traill.*

Department 1, IV Year.

This is a lecture and laboratory course of six hours per week, first term, dealing with the flow of water in pipes and open channels, measurement of water, and pumps and pumping.

**HEAT ENGINES.**

33. **THERMODYNAMICS:**—*R. W. Angus.*

Departments 3, 6 and 7, III Year; about 2 hours per week.

A lecture course in which the subject is treated in such a way as to make it of practical value and give a working acquaintance with the principles on which it is based. After the elementary ideas have been given and the proofs of the properties of Carnot's cycle, applications of the subject are made to the perfect gas and to saturated steam and to the various types of engines. Temperatures are taken from the air thermometer.

34. **THERMODYNAMICS:**—*R. W. Angus.*

Departments 1, 2 and 8, IV Year; 1 hour per week; both terms.

This course is especially designed to give the student a working knowledge of thermodynamics as applied to the perfect gas so that he will be able to understand clearly the action of air compressors, etc. After deducing general principles, the efficiency of compressed air transmission and the relative merits of different types of compressors are discussed.

35. **THERMODYNAMIC AND MECHANICAL LABORATORY:**—*L. M. Arkley.*

Department 3, III Year; 2 hours per week, first term; 3 hours per week, second term. Department 7, III Year; 2 hours per week, first term; 1½ hours per week, second term. Department 6; 3 hours per week, second term.

This laboratory course is designed to assist in a clearer understanding of thermodynamics, machine design and mechanics of machinery. The work in thermodynamics consists in the setting of slide valves, indicating engines measuring the brake horse-power, simple engine and boiler tests and the testing of gas and gasoline engines under various conditions. The mechanical laboratory work deals with the efficiency of belts and ropes as well as of several machines of simple construction. An examination of lubricating oils is also made by means of oil testing machines and other well-known devices. Experiments are also made on the balancing of reciprocating and rotating masses.

36. THERMODYNAMICS:—*L. M. Arkley, M. B. Jackson.*

Departments 3 and 7, IV Year; 3 hours per week; both terms.

This is a continuation of the introductory course, the subject being here treated from a general standpoint and the idea of entropy and of the absolute scale of temperatures being introduced. The course includes the treatment of saturated and superheated vapours, gases, the flow of fluids, chimney and boiler efficiency and the theory of various engines and other appliances including air compressors, refrigerating machines, injectors and the various forms of link motions and radial valve gears.

Text books:—Thermodynamics—Peabody; Steam Tables—Peabody.

37. THERMODYNAMICS:—*R. W. Angus, L. M. Arkley, M. B. Jackson.*

Departments 3 and 7, IV Year; about 10 hours per week.

The work in this year is a continuation and extension of the work covered in the third year laboratory course. Careful tests are made of engines of various types, such as simple, tandem and cross-compound steam engines; steam turbines; refrigerating machines; air engines; injectors and steam pumps, etc.; and an application is made of Hirn's Analysis and the entropy diagram to the results obtained. A complete set of experiments is made on each machine and the result plotted so as to show clearly to the student the effect of various alterations in the adjustment of the engine on the resulting efficiency.

Several modern gas and gasoline engines and a gas producer give ample opportunity for the study of this type of engine, and facilities are provided for sampling the gas supply and exhaust.

Two experimental stacks and three boilers enable results to be obtained on boiler efficiency and chimney draft.

38. STEAM ENGINES:—*L. M. Arkley.*

Departments 3, 7 and 8, II Year; one hour per week; one term.

This course of lectures includes a discussion of the principles of action of the steam engine; also the theory and design of various simple forms of valve gears used in the operation of such engines.

39. HEAT ENGINES:—*L. M. Arkley.*

Departments 3 and 7, III Year; Department 8, IV Year; one hour per week, both terms.

This course in heat engines is intended for students in Mechanical, Electrical and Metallurgical Engineering, to be supplementary to the general course of lectures in thermodynamics.

The principal commercial forms of heat engines are dealt with in a more or less descriptive manner; special attention is given to considerations affecting the design of the ordinary forms of steam engines, gas engines and oil engines.

39a. POWER:—*L. M. Arkley.*

Departments 1, 2, 6 and 8, IV Year; 21 hours.

A course of experiments with steam and gas engines, compressed air, etc.

**ARCHITECTURE.**

40. HISTORY OF ARCHITECTURE:—*A. Wellesley McConnell.*

Department 4, I Year; one hour per week; both terms.

In this course the development of architecture is treated very briefly and in an elementary manner, from the Pyramids of Egypt to the present, laying special emphasis on the Egyptian, Grecian and Western Asiatic work. The antique Greek and Roman orders are studied, and the students are required to make rendered drawings in the studio of certain orders and elements. An attempt is made to develop the student's sense of proportion, and in the latter part of the second term he is required to study a simple problem in design.

41. HISTORY OF ARCHITECTURE:—*A. Wellesley McConnell.*

Department 4, II Year; one hour per week; both terms.

The Classical, Early Christian, Byzantine and Romanesque styles of architecture are studied with the aid of the lantern. The student is required to become acquainted with the best examples in these styles in order that his sense of proportion and his taste may be developed and his knowledge of the different elements extended

42. HISTORY OF ARCHITECTURE:—*A. Wellesley McConnell.*

Department 4, III Year; one hour per week; both terms.

In this course the work of the previous year is continued, with the study of Gothic and the Renaissance.

43. HISTORY OF ORNAMENT:—*A. Wellesley McConnell.*

Department 4, II Year; one hour per week; both terms.

In this course the development of Ornament is traced from the beginning through Egyptian, Assyrian, Grecian, Roman, Byzantine, Romanesque and Moresque styles. An attempt is made to analyze ornament of the best periods and to systematize the principles followed in form and color. The development and types of mouldings are also studied.

44. HISTORY OF ORNAMENT:—*A. Wellesley McConnell.*

Department 4, III Year; one hour per week; both terms.

A continuation of the course in Ornament given to the Second Year. Instruction is given in lectures with the aid of the stereopticon. The students are required to become familiar with the characteristics and forms of the ornament used in the Gothic and Renaissance styles.

45. ORDERS OF ARCHITECTURE:—*A. Wellesley McConnell.*

Department 4, II Year; one hour per week; both terms.

Lectures on the Five Orders of Architecture, their affiliated forms and the other elements used in design. Simple problems in elementary design involving the use of the orders and other elements are set from time to time.

46. ARCHITECTURAL DESIGN:—*A. Wellesley McConnell.*

Department 4, II Year; one hour per week; both terms.

This course is given by means of individual instruction in the classroom by criticisms of the solutions of different problems set during the year and by a series of lectures. It is in this course that the student begins the serious study of design; continued practice in architectural drawing and rendering affords the training necessary to make the student a proficient draughtsman.

47. ARCHITECTURAL DESIGN:—*A. Wellesley McConnell.*

Department 4, III Year.

Theory and practice of Design.

This course is given by individual instruction in the studio and by lectures. The greater part of the course is devoted to problems in design, and forms a continuation of the course given in the preceding year.

48. ARCHITECTURAL DESIGN:—*A. Wellesley McConnell.*

Department 4, IV Year.

The entire course is devoted to advanced academic training in designing the more monumental classes of buildings. The student is required to design and submit sketches and working drawings of some subject to be selected by himself.

48a. ARCHITECTURAL DESIGN:—*A. Wellesley McConnell.*

Department 4, IV Year; Architectural Engineering Option.

A short course of lectures and studio work referring especially to the artistic side of the design of commercial buildings.

49. FREEHAND DRAWING AND WATER COLOR PAINTING:—*C. W. Jefferys.*

Department 4, I Year; 2 hours per week; both terms.

Drawing from still life objects. Primary freehand perspective. Primary pencil and pen and ink rendering.

## 49a. Department 4, II Year; 2 hours per week; both terms.

Drawing and monochrome painting from still life.

Drawing from the cast.

Pencil, pen and ink, and monochrome rendering.

Primary water color.

Drawing from landscape and natural objects.

49b. Department 4, III Year; 2 hours per week; both terms.

Drawing from the cast.

Water color from still life. Water color rendering.

Drawing from landscape and natural objects.

Students who are sufficiently advanced are admitted to the Fourth Year Life Drawing Class.

49c. Department 4, IV Year; 2 hours per week; both terms.

Water color from still life and from landscape.

Drawing from life.

Water color rendering.

50. MODELLING:—*J. L. Banks.*

Department 4; I Year; 2 hours per week; both terms.

The Orders. Synopsis of styles.

50a. Department 4; II Year; 2 hours per week; both terms.

The styles elaborated.

Problems in figures and in relation to architecture.

50b. Department 4; III Year; 2 hours per week; both terms.

Styles continued.

Problems, combination of figure, ornament and architecture, and then relative values.

50c. Department 4; IV Year; 2 hours per week; both terms.

Modelling from life.

Anatomy.

Composition of groups.

51. STRUCTURAL DESIGN:—*C. R. Young.*

Departments 1 (*Structural Engineering Option*) and 4, IV Year; 1 hour per week; both terms.

This course of lectures is devoted to the problems connected with the structural design of buildings of timber, steel and reinforced concrete. The various structural elements, such as the floors, columns, footings, walls and wind bracing, are fully discussed, and portions of typical buildings are designed in the class and drafting rooms.

Text books:—Architectural Engineering—Freitag; Steel Construction—Tucker; Structural Details—Jacoby; Architects' and Builders' Pocket Book—Kidder.



52. BUILDING MEASUREMENT:—*C. H. C. Wright.*

Department 4, I Year; 1 hour per week; both terms.

In this course of lectures the principles of measurements and mensuration with special reference to buildings will be discussed. With this is combined  $4\frac{1}{2}$  hours per week practice in measurements of existing buildings, quantities, etc.

53. BUILDING MATERIALS:—*C. H. C. Wright.*

Department 4, III Year; 2 hours per week; both terms.

The structural and aesthetic value of the various building materials.

54. SANITARY SCIENCE:—*C. H. C. Wright.*

Department 4, IV Year; 1 hour per week; both terms.

Modern plumbing, its design and installation.

54a. HEATING AND VENTILATION:—*C. H. C. Wright.*

Department 4, IV Year; 1 hour per week; both terms.

The design of different systems, where they should be used, heating specifications, etc.

### ASTRONOMY AND GEODESY.

55. ASTRONOMY, ELEMENTARY:—*C. A. Chant.*

Department 1, II Year; 1 hour per week; both terms.

A course in descriptive Astronomy, explaining the ordinary astronomical terms, and describing the various celestial bodies and their motions. In the evenings opportunity will be given for identifying the stars and for observing with telescopes.

Text book:—*New Astronomy*—D. P. Todd.

56. ASTRONOMY AND GEODESY:—*L. B. Stewart.*

Department 1, III Year; 2 hours per week.

The course of lectures deals with the determination of time, latitude, longitude and azimuth, by methods adapted to the use of the surveyor's transit and the sextant. It is designed to fulfil the requirements of the final examinations for Ontario and Dominion Land Surveyors.

In Geodesy an account is given of the principles and methods of a secondary triangulation survey, also of the principles involved in the North-West system of survey.

Text book:—*Practical Astronomy as applied to Geodesy and Navigation*—Doolittle; *Nautical Almanac*, 1915.

57. FIELD WORK:—*L. B. Stewart, S. R. Crerar.*

Department 1, III Year; about 1 hour per week; first term.

The practical work in this subject comprises observations in the field with the transit and sextant for the determination of time, latitude and azimuth by the methods described in the lectures.

58. **ASTRONOMY (Advanced):—***L. B. Stewart.*

Department 1, IV Year; 2 hours per week.

The lecture course in this subject comprises the theory and adjustment of the instruments used in connection with a geodetic survey; the methods of taking and reducing observations for time, longitude, latitude, and azimuth, with the precision required on such a survey; and other matters relating to these subjects.

59. **GEODESY AND METROLOGY:—***L. B. Stewart.*

Department 1, IV Year; 2 hours per week.

The lecture course includes a description of the methods of measuring base lines and the angles of a triangulation; the geometry of the spheroid with applications to geodetic problems; the computation of geodetic positions; the solution of large triangles on the earth's surface, and the adjustment of a triangulation; trigonometric and precise spirit levelling; the determination of the figure of the earth by arc measurements, and by the pendulum; the theory of map projections, etc.

60. **ASTRONOMY, GEODESY AND METROLOGY:—***L. B. Stewart.*

Department 1, IV Year; about 23 hours per week.

The practical work in the above subjects includes the observation of meridian transits for time and longitude determinations, and of prime vertical transits for latitude, with the astronomical transit instrument; the observation of meridian zenith distances of stars, and of azimuths at elongation for latitude, with the alt-azimuth; theodolite observations for azimuth; observations for latitude with the zenith telescope; the investigation of the constants of the instruments used, and the reduction of all observations; the measurement of a base line with the steel tape and with wires, and the determination of the constants of the tape; the measurement of the angles of a triangulation and the adjustment of the angles of a network of triangles, etc.

## BIOLOGY.

61. **ELEMENTARY BIOLOGY:—***B. A. Bensley.*

Department 5, I Year; optional in Department 1, III Year; 2 hours per week; both terms.

A course of two lectures a week throughout the session is designed as an introduction to the whole range of biological studies. After a sketch of the scope and objects of these, the lectures will treat (a) of the fundamental principles of biology, as illustrated by the simplest animals and plants; (b) of typical forms of higher plants in ascending order; (c) of typical forms of animals in a similar way; and (d) of the structure and functions of the human body.

Students are recommended to make use of the Biological Museum in connection with this course of lectures. For reference: Jeffrey Parker, *Elementary Biology*; Ramsay Wright, *High School Zoology*; Atkinson, *Elementary Botany*; Huxley, *Lessons in Elementary Physiology*.

62. **ELEMENTARY BIOLOGY:**—*A. G. Huntsman and J. H. Faull.*  
Department 5, I Year; 3 hours per week; both terms.  
An elementary course of laboratory work on the general structure and identification of plants and animals, and the use of the microscope in the examination of tissues and products.
63. **ADVANCED BIOLOGY:**—*J. H. Faull.*  
Department 5, II Year.  
A course of instruction on the Morphology and Physiology of Bacteria, Moulds and Yeast Fungi.
- 63a. **ADVANCED BIOLOGY:**—*J. H. Faull, E. M. Walker.*  
Department 1, IV Year.  
(a) *Botany:*—An elementary lecture and laboratory course of about 3 hours per week, second term, on the economic algæ and fungi.  
(b) *Zoology:*—Lecture and laboratory course of 4 hours per week, second term, on the morphology, ecology and classification of aquatic animals.
64. **BACTERIOLOGY:**—*J. A. Amyot.*  
Departments 1, 5 and 6, IV Year; a lecture and laboratory course of 8 hours per week, second term, on elementary bacteriology.

### BUSINESS.

65. **ACCOUNTING:**—*W. S. Ferguson.*  
All Departments, I Year; 1 hour per week; both terms.  
The principles of accounting; illustrated by typical accounts.
66. **BANKING AND FINANCE:**—*M. A. Mackenzie.*  
All Departments, II Year; 1 hour per week; both terms.  
Money and the instruments of credit; stocks and bonds.
67. **LIMITED COMPANIES:**—*J. M. Langstaff.*  
All Departments, III Year; 1 hour per week; both terms.  
Partnerships; the history and development of the limited liability company; the Companies Acts; Company finance.
68. **CONTRACTS AND SPECIFICATIONS:**—*C. R. Young.*  
Departments 1 and 4, IV Year; 1 hour per week; second term.

This course of lectures deals with the fundamental principles of contract and specification writing. The critical examination of typical specifications and agreements by the class forms an essential feature of the instruction.

**Text books:**—Engineering Contracts and Specifications—Johnson: Elements of Specification Writing—Kirby; Specifications and Contracts—Wadell-Wait.

69. **COST-KEEPING, ETC.:**—*J. W. Bain, H. W. Price, L. M. Arkley.*  
Departments 2, 3, 5, 6 and 7, IV Year.  
Works management, mechanical specifications, analysis of costs, reports.

### CHEMISTRY.

75. **ELEMENTARY CHEMISTRY:**—*J. W. Bain.*  
All Departments, I Year; 2 hours per week; both terms.  
A lecture course in elementary chemistry dealing with the metals and non-metals, with experimental illustrations.
76. **ELEMENTARY CHEMISTRY:**—*M. C. Boswell.*  
Departments 2 and 6, I Year; 3 hours per week; second term.  
A laboratory course to illustrate the use of the sensitive balance, to verify some of the laws which form the basis of the science, and to serve as an introduction to quantitative laboratory methods.  
Instruction given as required before each period.
77. **INORGANIC CHEMISTRY:**—*W. H. Ellis.*  
Departments 5, 6 and 8, I Year; 1 hour per week; both terms.  
A lecture course on the elements and important inorganic compounds, supplementing Course 75.  
**Text book:**—Introduction to General Inorganic Chemistry—Alex. Smith.
78. **INORGANIC CHEMISTRY:**—*L. J. Rogers.*  
Departments 5 and 8, I Year; about 17 hours per week; both terms.  
A laboratory course of quantitative experiments illustrating the use of the sensitive balance, and confirming the fundamental laws of chemistry; qualitative inorganic analysis; quantitative analysis of pure salts; inorganic preparations; molar weight determinations.  
**Text book:**—Manual of Chemical Analysis, Qualitative and Quantitative—Newth.
79. **INORGANIC CHEMISTRY:**—*J. W. Bain.*  
Departments 2, 5, 6 and 8, II Year; 1 hour per week; first term.  
A lecture course on the chemistry of the metals; a continuation of Course 75.

80. **ANALYTICAL CHEMISTRY**:—*E. G. R. Ardagh*.  
Departments 5 and 8, II Year; Departments 2 and 6, III Year; 1 hour per week: both terms.  
A lecture course on the principles of chemical analysis; select gravimetric and volumetric methods; technical analysis.
81. **ANALYTICAL CHEMISTRY**:—*E. G. R. Ardagh*.  
Departments 1, 2, 3 and 7, II Year; 6 hours per week; one term.  
Laboratory practice in elementary qualitative and quantitative analysis.  
Text book:—*A Smaller Chemical Analysis*—Newth.
82. **ANALYTICAL CHEMISTRY**:—*J. W. Bain*.  
Department 2, II Year; 3 hours per week; both terms.  
A laboratory course in the gravimetric determination of metals and acids, with elementary volumetric analysis.  
Text book:—*A Manual of Chemical Analysis, Qualitative and Quantitative*—Newth.
83. **ANALYTICAL CHEMISTRY**:—*L. J. Rogers*.  
Departments 5 and 8, II Year; 14 hours per week; 17 weeks.  
A laboratory course comprising gravimetric and volumetric methods, acidimetry and alkalimetry.  
Text book:—*A Manual of Chemical Analysis, Qualitative and Quantitative*—Newth.
84. **ANALYTICAL CHEMISTRY**:—*E. G. R. Ardagh*.  
Department 6, II Year; 6 hours per week; both terms.  
A laboratory course in qualitative and elementary quantitative chemical analysis; inorganic preparations.  
Text book:—*A Manual of Chemical Analysis, Qualitative and Quantitative*—Newth.
85. **ENGINEERING CHEMISTRY**:—*W. H. Ellis*.  
Departments 1, 2, 3, 5, 6, 7 and 8, II Year; 1 hour per week; second term.  
A lecture course consisting of a study of the industrial production and application of heat and light, and of the chemistry of fuel and the products of combustion.
86. **INDUSTRIAL CHEMISTRY**:—*W. H. Ellis*.  
Departments 5 and 6, II Year; 1 hour per week; both terms.  
A lecture course on the manufacture of salts, acids, alkalies and inorganic chemicals.  
Text book:—*Inorganic Chemistry*—Thorp.



87. ORGANIC CHEMISTRY:—*M. C. Boswell.*  
Departments 1, 2, 3 and 7, II Year; 1 hour per week; first term.  
A lecture course in elementary organic chemistry.  
Text book:—Theoretical Organic Chemistry—Cohen.
  
88. ORGANIC CHEMISTRY:—*M. C. Boswell.*  
Departments 5 and 6, II Year; 2 hours per week; both terms.  
A lecture course dealing with the aliphatic compounds.  
Text book:—Theoretical Organic Chemistry—Cohen.
  
89. ORGANIC CHEMISTRY:—*M. C. Boswell.*  
Department 5, II Year; 14 hours per week; 7 weeks.  
A laboratory course in organic preparations in the aliphatic series.
  
90. PHYSICAL CHEMISTRY:—*W. L. Miller.*  
Departments 5, 6 and 8, II Year; 2 hours per week; both terms.  
A course of lectures on the elements of chemical mechanics, and the theory of solutions.
  
91. ANALYTICAL CHEMISTRY:—*E. G. R. Ardagh.*  
Department 5, III Year; 19 hours per week; 16 weeks.  
A laboratory course on the technical analysis of iron and steel alloys, ores, furnace products, ceramic materials, foods, gases, fuels, etc.
  
92. ANALYTICAL CHEMISTRY:—*L. J. Rogers.*  
Department 6, III Year; 11 hours per week, first term; 13 hours per week, second term.  
A laboratory course in volumetric and technical analysis.
  
93. ANALYTICAL CHEMISTRY:—*L. J. Rogers.*  
Departments 2 and 8, III Year; 5 hours per week; both terms.  
A laboratory course on the technical analysis of ores and furnace products.
  
94. ENGINEERING CHEMISTRY:—*W. H. Ellis.*  
Departments 1, 2, 3, 5, 6 and 7, III Year; Department 4, II Year; 1 hour per week; both terms.  
A lecture course on the application of chemistry to engineering problems; air, water, sewage, the materials of construction, explosives, etc.
  
95. INDUSTRIAL CHEMISTRY:—*W. H. Ellis.*  
Departments 5 and 6, III Year; 1 hour per week; both terms.  
A lecture course on petroleum and its products, coal tar and its products, the destructive distillation of wood; fats, oils, soap, sugar, starch, and gums; fermentation industries, etc.  
Text book:—Industrial Chemistry—Thorp.

96. CHEMICAL PLANT:—*J. W. Bain.*  
Departments 5 and 6, III Year; 1 hour per week; both terms.  
A lecture course on the machinery and plant used in chemical manufacturing.
97. ORGANIC CHEMISTRY (A):—*M. C. Boswell.*  
Departments 5 and 6, III Year; 2 hours per week; both terms.  
A lecture course on the aromatic series.  
Text book:—Theoretical Organic Chemistry—Cohen.
98. ORGANIC CHEMISTRY (B):—*F. B. Allan.*  
Departments 5 and 6, III Year; 1 hour per week; second term.  
A lecture course on stereoisomerism, desmotropism, etc.
99. ORGANIC CHEMISTRY:—*M. C. Boswell.*  
Department 5, III Year; 19 hours per week; 8 weeks.  
A laboratory course in organic preparations in the aromatic series; organic analysis.
100. ORGANIC CHEMISTRY:—*M. C. Boswell.*  
Department 6, III Year; 17 hours per week; 4 weeks.  
A laboratory course in organic preparations.
101. ELECTROCHEMISTRY:—*W. L. Miller.*  
Departments 5, 6, 7 and 8, III Year; 2 hours per week; first term.  
A lecture course on elementary electrochemistry, illustrated by experiments.
102. ELECTROCHEMISTRY:—*W. L. Miller.*  
Departments 5, 6, 7 and 8, III Year; 3 hours per week; first term.  
A laboratory course in quantitative measurements to accompany Course 101.
103. INORGANIC CHEMISTRY:—*J. W. Bain.*  
Departments 5 and 6, IV Year; 1 hour per week; both terms.  
A lecture course on chemical theory.
104. ORGANIC CHEMISTRY:—*M. C. Boswell.*  
Departments 5 and 6, IV Year; 1 hour per week; both terms.  
A lecture course on advanced organic chemistry.
105. ORGANIC CHEMISTRY:—*M. C. Boswell.*  
Departments 5 and 6, IV Year.  
A laboratory course in advanced organic chemistry.

106. **INDUSTRIAL CHEMISTRY:**—*W. H. Ellis, J. W. Bain.*  
Departments 5 and 6, IV Year; 1 hour per week; both terms.  
A lecture course on selected subjects in chemical technology.
107. **INDUSTRIAL CHEMISTRY:**—*W. H. Ellis, J. W. Bain.*  
Departments 5 and 6, IV Year; about 28 hours per week; both terms.  
A laboratory course in industrial problems.
108. **ELECTROCHEMISTRY:**—*W. L. Miller.*  
Departments 5, 6 and 7, IV Year; 2 hours per week; both terms.  
An advanced lecture course on the theory of solutions and electro-lysis, and the application to the practice of electro-deposition and electrolytic refining of metals. The course also includes lectures on the electric furnace with special consideration of efficiency.  
Text books:—Electrometallurgy—Borchers; Electrochemistry—Le Blanc; Electrochemistry—Luepke.
109. **ELECTROCHEMISTRY:**—*W. L. Miller.*  
Departments 5, 6 and 7, IV Year; about 28 hours per week.  
A laboratory course accompanying Course 108.
110. **SANITARY AND FORENSIC CHEMISTRY:**—*W. H. Ellis.*  
Departments 5 and 6, IV Year; 1 hour per week; both terms.  
A lecture course on the composition and examination of air, water and food; poisons and their detection.
111. **SANITARY AND FORENSIC CHEMISTRY:**—*W. H. Ellis.*  
Departments 5 and 6, IV Year.  
A laboratory course accompanying Course 110.
112. **ANALYTICAL CHEMISTRY:**—*E. G. R. Ardagh.*  
Department 2, IV Year, 12 hours per week; first term.  
A laboratory course comprising analysis of ores and furnace products.
113. **SANITARY CHEMISTRY:**—*H. M. Lancaster, E. G. R. Ardagh.*  
Department 1, IV Year.  
A lecture and laboratory course of about 16 hours per week for one term on water supply sewage disposal, ventilation, etc.

### DESCRIPTIVE GEOMETRY AND DRAWING.

115. **DESCRIPTIVE GEOMETRY:**—*J. R. Cockburn.*  
Departments 1, 2, 3, 6, 7 and 8, I Year; 1 hour per week; both terms.  
This course of lectures deals chiefly with the principles of orthographic and oblique projections and the application of such principles to the solutions of problems relating to straight lines and planes.

116. DESCRIPTIVE GEOMETRY:—*J. R. Cockburn.*

Department 4, I Year; 1 hour per week; both terms.

This course of lectures deals chiefly with the principles of orthographic and oblique projections and the application of such principles to the solution of problems relating to straight lines and planes, special reference being made to the determination of shades and shadows.

117. DRAWING:—*J. R. Cockburn.*

Departments 1 and 2, I Year; about 16 hours per week.

Copying from the flat, lettering, topography; graphical solution of problems in statics; problems in descriptive geometry, relating to both orthographic and oblique projections; the plotting of original surveys; measured drawings.

118. DRAWING:—*J. R. Cockburn, A. Wellesley McConnell.*

Department 4, I Year; about 15 hours per week.

Copying from the flat, lettering, topography, freehand drawing in black and white, both from copies and models; the graphical solution of problems in statics; problems in descriptive geometry, relating to both orthographic and oblique projections; measured drawings. Elements and principles of Architecture.

119. DRAWING:—*J. R. Cockburn.*

Department 5, I Year; about 9 hours per week.

Copying from the flat, lettering, measured drawings.

120. DRAWING:—*J. R. Cockburn.*

Departments 3, 6, 7 and 8, I Year; about 20 hours per week.

Copying from the flat, lettering, topography; graphical solution of problems in statics; problems in descriptive geometry, relating to both orthographic and oblique projections; measured drawings.

121. DESCRIPTIVE GEOMETRY:—*J. R. Cockburn.*

Departments 1, 2, 3, 7 and 8, II Year; 1 hour per week; both terms.

This course of lectures is a continuation of the work taken in the first year with the following additions: Problems relating to curved surfaces, principles of shades, shadows and perspective.

122. DESCRIPTIVE GEOMETRY:—*J. R. Cockburn.*

Department 4, II Year; 1 hour per week; both terms.

This course of lectures is a continuation of the work taken in the First Year with the addition of problems relating to curved surfaces, shades, shadows and perspective.

123. DRAWING:—*J. R. Cockburn.*

Departments 1 and 2, II Year. Department 1, about 14 hours per week. Department 2, about 7 hours per week; both terms.

Coloring and shading as applied to both topographical and construction drawings; problems in descriptive geometry relating to solids bounded by curved surfaces; principles of shades, shadows and perspective; solution of problems in optics and strength of materials; measured drawings; elementary design.

124. DRAWING:—*J. R. Cockburn.*

Departments 3 and 7, II Year; about 15 hours per week; both terms. Coloring and shading as applied to construction drawings; problems in descriptive geometry relating to solids bounded by curved surfaces; principles of shades, shadows and perspective; solution of problems in optics, theory of mechanism and strength of materials; measured drawings; elementary design.

125. DRAWING:—*J. R. Cockburn, A. Wellesley McConnell.*

Department 4, II Year; about 18 hours per week; both terms.

Freehand drawing including monochrome and colors; exercises from the orders of architecture; principles of shades, shadows and perspective; elementary architectural design; problems in descriptive geometry relating to solids bound by curved surfaces; solution of problems in optics and strength of materials; measured drawings.

126. DRAWING:—*J. R. Cockburn.*

Department 6, II Year.

Same as Department 3, with exception that theory of mechanism is not included.

127. DESCRIPTIVE GEOMETRY:—*J. R. Cockburn.*

Department 1, III Year; 1 hour per week; one term.

This course of lectures deals with spherical projections, the principles of mapmaking, and the graphical solution of spherical triangles.

128. DRAWING:—*J. R. Cockburn, C. R. Young.*

Department 1, III Year; about 12 hours per week.

Principles of mapmaking, spherical projection, plotting of original surveys relating to topographical and railway work; problems in theory of construction; original design of various structures; measured drawings.

129. DRAWING:—*J. R. Cockburn.*

Department 2, III Year;  $4\frac{1}{2}$  hours per week.

Plotting of original surveys, relating to topographical and railway work and mining; problems in theory of construction; original design; measured drawings.



130. DRAWING:—*J. R. Cockburn, A. Wellesley McConnell, C. R. Young.*  
 Department 4, III Year; about 16 hours per week, first term; 22 hours per week, second term.  
 Advanced work in monochrome and colors; problems in shades, shadows and perspective; architectural design; problems in theory of construction, including framed structures.
131. DESCRIPTIVE GEOMETRY:—*J. R. Cockburn.*  
 Department 4, III Year; 1 hour per week; first term.  
 Advanced work in shades, shadows and perspective.
132. DRAWING:—*J. R. Cockburn, C. R. Young.*  
 Departments 2, 3 and 6, III Year; 3 hours per week; both terms.  
 Problems in design dealing with the theory of structures.

### ELECTRICITY.

135. MAGNETISM AND ELECTRICITY:—*H. W. Price.*  
 Departments 3, 5, 6 and 7, I Year; Department 8, II Year; 2 hours per week; first term.  
 A course of lectures on general principles relating to magnetism, electricity, electromagnetism, electrostatics, etc., illustrated largely from engineering apparatus.  
 Text book:—Elementary Electricity and Magnetism—S. P. Thompson.
136. ELECTRIC CIRCUITS:—*W. S. Guest.*  
 Departments 3, 5, 6 and 7, I Year; 2 hours per week; second term.  
 This course of lectures concerns chiefly fundamental principles relating to electric circuits, and leads to consideration of such problems as the distribution of electric energy through lines and networks and the division of load between generators.  
 Text book:—Electrical Problems—Hooper and Wells.
137. ELECTRICITY:—*W. S. Guest.*  
 Departments 3, 5, 6 and 7, I Year; 3 hours, alternate weeks; both terms.  
 A laboratory course of experiments, given in logical order, designed to demonstrate fundamental principles in connection with the generation and flow of currents in electric circuits. The work is associated with the lecture courses, magnetism and electricity, and electric circuits (135, 136).

138. ELECTRICITY:—*T. R. Rosebrugh.*  
 Departments 3, 5, 6 and 7, II Year; 2 hours per week; both terms.

Deals with the theory of electrical measurements, and detailed study of various methods applicable under different conditions in engineering practice to the measurement of resistance, current, potential difference, power and energy; calibration of commercial measuring instruments. The effect of choice of conditions of measurement on the accuracy of the result is considered.

Text book:—Electrical Measurements—Carhart and Patterson.

139. ELECTRICAL LABORATORY:—*W. S. Guest.*

Departments 3, 5, 6 and 7, II Year; 2½ hours per week; both terms.

This laboratory course is closely associated with the lecture course 138 on electricity for the second year. The more important and useful methods of testing generators and circuits for electromotive force, resistance, current, grounds, etc., are practised, often under conditions such as occur in practice. The work also includes methods of calibration of measuring instruments for voltage, current, power and energy, and certain studies of properties of incandescent lamps.

140. ELECTRICITY:—*H. W. Price.*

Department 8, II Year; Department 2, III Year; Departments 1 and 4, IV Year; 1 hour per week.

A course designed to fit the requirements of non-electrical students.

A study of essential principles is followed by discussion of electrical apparatus plants, power transmission, railways, etc.

Text book:—Elementary Electricity and Magnetism—Jackson.

141. POWER:—*H. W. Price.*

Departments 2, 6 and 8, IV Year; 24 hours.

Under the name "Power" a number of operating experiments are arranged to afford some familiarity with measuring instruments and direct and alternating current machinery.

142. MAGNETISM AND ELECTRICITY:—*T. R. Rosebrugh.*

Departments 3 and 7, III Year; 2 hours per week; both terms.

A course of lectures on theory of magnetism and magnetic circuits, theory of direct current generators, motors, etc.

Text book:—Elements of Electrical Engineering, Vol. I—Franklin and Esty.

143. ALTERNATING CURRENT:—*T. R. Rosebrugh.*

Departments 3 and 7, III Year; 1 hour per week.

A first course of lectures on alternating current, covering principles of measurement and leading to the analytical and graphical treatment of the simpler problems relative to alternating current circuits and machinery.

Text book:—Elements of Electrical Engineering, Vol. II—Franklin and Esty.

144. ELECTRICAL LABORATORY:—*T. R. Rosebrugh, H. W. Price.*

Departments 3 and 7, III Year; 6 hours per week.

This laboratory course is intended to afford the student an opportunity to become familiar with principles involved in continuous current shunt, series and compound wound generators and motors, and, to some extent, alternating current circuits and machinery. Other sections of the work deal with the magnetic properties of iron and steel, and study of iron losses in transformers and generators.

The course is arranged to stand in close relation to the lecture courses in the subjects of magnetism and electricity and alternating current (142, 143) for III Year, and to certain design work (145).

145. ELECTRICAL DESIGN:—*H. W. Price.*

Department 7, III Year; 1 hour per week.

A course of lectures dealing with design of electric machinery and plants, accompanied by designs to be worked out in the design room.

References:—Dynamo-electric Machinery—S. P. Thompson; Electric Machine Design—Parshall and Hobart.

146. ELECTRICAL DESIGN:—*H. W. Price.*

Department 7, III Year.

A design room is set apart for working out designs of electrical apparatus such as transformers, generators, motors, auxiliary apparatus, etc.

Special forms and notes are employed, arranged to suit the various studies. Certain models are provided to assist where necessary.

147. APPLIED ELECTRICITY:—*T. R. Rosebrugh.*

Department 7, IV Year.

This course deals by analytical and vector methods with the theory of alternating current circuits and machinery. Applications of theory are considered with regard to transformers, single and polyphase generators, synchronous motors and rotary converters, induction and commutating series motors, transmission lines, wave analysis, etc.

148. ELECTRICAL LABORATORY:—*T. R. Rosebrugh, H. W. Price, R. H. Hopkins.*

Department 7, IV Year, in connection with 147.

This laboratory course involves a thorough study of principles and properties of single and polyphase circuits and apparatus. Both vector and analytical methods are applied to the solution of problems based on tests made on laboratory machines.

The work deals mainly with constant voltage and constant current transformers, single and polyphase alternators, synchronous motors, rotary converters, induction and single phase commutating motors, transmission line, etc. The work does not consist only of factory tests, but is designed to lead the student to apply theory to practice as illustrated in the apparatus under test, with a view to an exact understanding of methods and an appreciation of limitations under many conditions. Free use is made of the oscillograph as a necessary device for "seeing" conditions under investigation. The best commercial measuring instruments are available.

### GEOLOGY.

#### 150. GEOLOGY (Elementary):—*A. P. Coleman.*

Departments 2 and 5, II Year; Department 1, III Year; 1 hour per week; both terms.

This course deals chiefly with historical geology with special reference to Canadian formations.

Reference books:—Introduction to Geology—Scott; Text Book of Geology—Dana.

#### 151. ECONOMIC GEOLOGY. (Including Dynamical and Structural Geology):—*A. P. Coleman.*

Department 2, III Year; 2 hours per week; both terms. Department 1, IV Year.

A study of the more important economic rocks, minerals and ores with their geological associations. Special attention paid to Canadian deposits.

#### 152. ADVANCED GEOLOGY:—*A. P. Coleman.*

Department 2, IV Year.

(A) *Pre-Cambrian Geology*.—An account of the Keewatin, Huronian and Laurentian rocks of Canada, with their distribution, structural relations and economic features, and briefer accounts of similar formations in the United States and elsewhere.

Works of Reference:—Reports of the United States and Canadian Geological Surveys, of the Bureau of Mines of Ontario, etc.

(B) *Pleistocene Geology*.—Lectures on the formation and distribution of the drift deposits of North America, with brief references to other regions. Glacial, Interglacial and Postglacial beds are described, changes of climate are discussed with their probable

causes, and the economic features of the clays, sands and gravels are pointed out. A weekly excursion is made during October and November to points of interest near Toronto, which is the centre of the most important development of Pleistocene in America.

- (C) *Physiography*.—A course of lectures on the surface forms of the earth, with the geological factors which have produced them. The broad features of the earth, its plains, tablelands, hills, valleys, mountains, oceans, rivers and lakes are discussed in a general way, methods of topographical surveys and mapping are referred to, and the chief physiographic areas of Canada are described.

153. MINING GEOLOGY:—*A. P. Coleman*.

Department 2, IV Year; 1 hour per week; both terms.

A course of lectures on geological problems associated with mining, typical mining regions in Canada, the United States and elsewhere being discussed from the geological side.

Works of reference:—Mineral Industry and the books mentioned under (A).

154. GEOLOGICAL EXCURSIONS:—*A. P. Coleman*.

Department 2, IV Year.

Trips to points of interest in the vicinity of Toronto.

155. ORE DEPOSITS:—*A. P. Coleman*.

Department 2, III Year; 1 hour per week; both terms.

Discussion of the origin and classification of ore deposits in a general way, the mode of occurrence of the chief metals, and statistics of production, special attention being given to the metals mined in Canada.

156. ECONOMIC GEOLOGY:—*W. A. Parks*.

Department 2, III Year; 1 hour per week; both terms.

Laboratory work on ores, manner of occurrence, vein structure, etc. Geological maps of typical mining regions.

### MINERALOGY.

157. ELEMENTARY MINERALOGY:—*J. E. Thomson*.

Department 5, I Year; Department 2, II Year; 2 lectures per week; first term.

After introducing the student to the chief chemical, physical and crystallographic characteristics of minerals, the course becomes descriptive and deals with about one hundred of the minerals most important from the industrial or scientific point of view.

Text books:—Minerals and how to study them—Dana; Text Book of Mineralogy—Dana.



158. MINERALOGY:—*J. E. Thomson.*

Department 5, I Year; 4 hours per week, first term; 3 hours per week, second term.

Introduction to blow-pipe analysis, determination of minerals by inspection and physical tests.

Text books:—Text Book of Mineralogy—Dana; Determinative Mineralogy—Lewis.

159. PRIMARY MINERALOGY:—*A. L. Parsons.*

Department 1, II Year; 2 hours per week; first term.

A very brief introduction to the study of minerals and rocks.

Text books:—Minerals and how to study them—Dana; Handbook of Rocks—Kemp.

160. MINERALOGY:—*A. L. Parsons, J. E. Thomson.*

Department 2, II Year; 1 hour per week, first term; 3 hours per week, second term.

Determination of minerals by inspection and by means of physical tests; introduction to blow-pipe practice.

Text books:—Mineral Tables—Eakle; Determinative Mineralogy—Lewis.

161. MINERALOGY:—*A. L. Parsons, J. E. Thomson.*

Department 1, II Year; 1 hour per week, first term; 2 hours per week, second term.

Determination of minerals by inspection and by means of physical tests; study of common rock types and their identification.

Text books:—Mineral Tables—Eakle; Handbook of Rocks—Kemp.

162. MINERALOGY:—*A. L. Parsons.*

Department 5, II Year; 1 hour per week; second term.

Introduction to the study of rocks; determination of minerals and rocks by means of tables based on the physical properties.

Text books:—Mineral Tables—Eakle; Handbook of Rocks—Kemp.

163. ELEMENTARY PETROGRAPHY:—*T. L. Walker.*

Department 2, III Year; 1 hour per week.

A course of lectures and laboratory work introducing the student to the macroscopic study of rocks.

Text books:—Handbook of Rocks—Kemp; Rocks and rock minerals—Pirsson.

164. MINERALOGY:—*J. E. Thomson.*

Department 2, III Year; 2 hours per week.

Determination of minerals by means of the blow-pipe and physical properties.

Text books:—Mineral Tables—Eakle; Determinative Mineralogy—Lewis.

165. GENERAL PETROGRAPHY:—*T. L. Walker.*  
 Department 2, IV Year. 1 hour per week.  
 Study of the chief rock-forming minerals and of some phases of petrography not covered in the course of the previous year.
166. PETROGRAPHY:—*T. L. Walker.*  
 Department 2, IV Year; 2 hours per week; both terms.  
 Study of the chief rock-forming minerals, of rocks in thin sections and in hand specimens.  
 Text books:—Rocks and Rock Minerals—Pirsson; Minerals in Rock Sections—Luquer.
167. CRYSTALLOGRAPHY:—*A. L. Parsons.*  
 Department 5, III Year; 1 hour per week.  
 A course devoted to lectures and practical work on the geometrical and optical properties of crystals, preparing the student for the study of rocks in thin sections and for the examination of crystallized substances, natural and artificial, under the polarizing microscope.
168. MINERALOGY:—*J. E. Thomson.*  
 Department 8, I Year; 1½ hours a week, second term.  
 Determination of minerals by means of the blow-pipe.  
 Text Book:—Lewis, Determinative Mineralogy.
169. MINERALOGY:—*A. L. Parsons.*  
 Department 8, II Year; 1 hour per week.  
 Determination of minerals by physical properties.  
 Text Book:—Mineral Tables—Eakle.

### MINING, ASSAYING AND ORE DRESSING.

170. MINING:—*H. E. T. Haultain.*  
 Department 2, II Year; 1 hour per week; first term. Department 8, II Year; 1 hour per week; both terms.  
 An introduction to the study of mining and ore dressing methods.
171. MINING AND ORE DRESSING:—*H. E. T. Haultain, F. C. Dyer.*  
 Department 2, II Year; 3 hours per week; second term.  
 Introductory work with rock-drills and various ore dressing appliances.
172. MINING:—*H. E. T. Haultain, F. C. Dyer.*  
 Departments 2 and 8, III Year; 1 hour lecture per week, both terms; 3 hours' laboratory work per week, one term.  
 General mining methods.

173. ASSAYING:—*H. E. T. Haultain, J. T. King.*  
 Departments 2, 5 and 6, III Year; 1 hour lecture per week, one term;  
 3 hours' laboratory work per week, both terms.  
 Assaying of various ores for gold, silver, lead and copper.
174. ASSAYING:—*H. E. T. Haultain, J. T. King.*  
 Department 2, IV Year; 1 hour lecture per week, one term; 3 hours'  
 laboratory work per week, one term.  
 Continuation of the work of III Year.
175. MINING:—*H. E. T. Haultain.*  
 Department 2, IV Year; 1 hour lecture per week; both terms.  
 Special mining methods, examinations, reports.
176. MILLING:—*H. E. T. Haultain, F. C. Dyer.*  
 Department 2, IV Year; 3 hours' laboratory work per week; both  
 terms.  
 Advanced work with ore dressing appliances, complete mill tests.
177. ORE DRESSING:—*H. E. T. Haultain, F. C. Dyer.*  
 Departments 2 and 8, III Year; 1 hour per week; both terms.
179. ORE DRESSING:—*H. E. T. Haultain, F. C. Dyer.*  
 Department 2, IV Year; 1 hour per week; both terms.

## METALLURGY.

180. METALLURGY:—*G. A. Guess.*  
 Departments 2, 5 and 6, IV Year; 1 hour per week; both terms.  
 Advanced studies in the metallurgy of gold, silver, copper and lead, etc.
181. FERRO-METALLURGY:—*T. R. Loudon.*  
 Departments 1, 2, 3, 5, 6, 7 and 8, III Year; 1 hour per week; both terms.  
 The physical properties of iron and steel and the circumstances that  
 influence the strength, etc., of iron. The different modes of manu-  
 facture of iron and steel and the effect of different processes of  
 making on the resulting products; explanations of specifications  
 for iron and steel adopted by engineers.
182. METALLURGY:—*G. A. Guess, W. S. Bishop.*  
 Department 2, IV Year; 6 hours' laboratory work per week; second  
 term.  
 Calibration of pyrometers, blast furnace smelting and copper con-  
 verting, cyanidation, acid leaching of copper ores, electrolytic  
 refining of lead and copper, electrometallurgy.

183. METALLURGY:—*G. A. Guess, W. S. Bishop.*

Departments 2, 5, 6 and 8, II Year; 1 hour per week; one term  
An introduction to the study of general metallurgy.

184. METALLURGY:—*G. A. Guess.*

Departments 2, 5 and 6, III Year; 1 hour per week; both terms.  
General metallurgy of gold, silver, lead and copper.

185. METALLURGY:—*W. S. Bishop.*

Department 8, II Year; 1 hour per week, both terms.

A lecture course in the study of metallurgical fuels, their use, preparation, calorific value and temperature of combustion, introduction to the study of metallurgical processes. Problems.

Two hours' laboratory work, second term.

186. METALLURGY:—*G. A. Guess.*

Department 8, III Year; 1 hour per week; first term; 4 hours per week; second term.

The uses, properties and metallurgy of the metals except iron, with special reference to copper, nickel, lead and zinc. The study of clays and their industrial uses. A laboratory course of 100 hours.

186a. METALLURGY:—*G. A. Guess, W. S. Bishop.*

Department 8, IV Year; 2 hours per week, both terms, and 9 hours' laboratory work, both terms.

Lixiviation of copper ores, design and organization of plants, metallurgical book-keeping, metallurgical balance sheets, thermal balance sheets, electrometallurgy, electrolytic refining processes, a particular study of Canadian problems.

## MATHEMATICS.

187. ALGEBRA:—*A. T. DeLury.*

All Departments, I Year; 2 hours per week; both terms.

Simple equations of one, two and three unknown quantities; quadratic equations of one and two unknown quantities; graphic representation of functions and the introduction of the gradient function; proportion and progressions; interest forms and annuities, permutations, combinations, limits, the general theory of infinite series, binomial theorem, exponential and logarithmic series.

Text book:—Intermediate Algebra—DeLury.

188. ANALYTICAL GEOMETRY:—*J. R. Pounder.*

All Departments, I Year; 1 hour per week; both terms.

The course in Elementary Analytical Geometry covers the more familiar propositions in connection with the straight line, circle, parabola, ellipse and hyperbola. The subject is treated so as to illustrate the general methods of analytical geometry.

189. TRIGONOMETRY, PLANE:—*M. A. Mackenzie.*

All Departments, I Year; 2 hours per week; first term.

Solutions of triangles and practical problems.

Text book:—Practical Trigonometry—Plane and Fawdry.

190. CALCULUS, DIFFERENTIAL AND INTEGRAL:—*S. Beatty.*

Departments 1, 2, 3, 4, 6, 7 and 8, II Year; Department 5, II Year, optional; 2 hours per week; both terms.

This is an elementary course in the infinitesimal calculus, but adequate to afford a knowledge of the character and methods of the subject and to enable students in chemistry, engineering, etc., to understand such of their text books as introduce the calculus.

191. TRIGONOMETRY, SPHERICAL:—*L. B. Stewart.*

Department 1, II Year; 1 hour per week; first term.

A course of lectures includes the derivation of formulæ and their application to the solution of triangles and to practical problems.

Text book:—Spherical Trigonometry—Todhunter and Leatham.

192. LEAST SQUARES, METHOD OF:—*L. B. Stewart.*

Department 1, III Year; 1 hour per week; first term.

The course of lectures includes: The general principles of probability, the law of error, direct measurements of equal and different weights; mean square and probable errors; indirect measurements; conditioned observations; applications to empirical constants and formulæ, etc.

Text book:—Least Squares—Merriman.

### TECHNICAL PHYSICS.

195. ACOUSTICS:—*G. R. Anderson.*

Department 4, III Year.

Wave motion, propagation, reflection and transmission of sounds. Laws of vibrating strings, pipes and forks. Velocity of sound. Musical scales. Absorption of sound by various substances, use of deadening material in buildings. Amount of reverberation permissible and desirable in public buildings. Lectures and laboratory work.

196. HYDROSTATICS:—*G. R. Anderson.*

All Departments, II Year.



Laws of fluid pressure and application to machines. Density of solids and fluids, theory of flotation.

Lectures and laboratory work. Spring term.

197. OPTICS:—*G. R. Anderson.*

All Departments, II Year.

Rectilinear propagation of light, illumination, photometry, light standards. Distribution of light by reflectors and diffusers, general and selective absorption, economic values of artificial lights.

Laws of reflection and refraction, theory of optical instruments.

Light considered as wave motion, dispersion, spectrum analysis, colour phenomena, polarization.

Lectures and laboratory work, Fall term.

198. HEAT:—*G. R. Anderson.*

Departments 1 and 5, III Year.

Generation and propagation of heat. General and industrial thermometry, calorimetry and pyrometry. Linear and cubical expansion, gas laws. Specific heat of solids, liquids and gases, latent heat of fusion and vaporization. Mechanical equivalent of heat. Carnot cycle.

Lectures and laboratory work, Fall term.

199. PHOTOGRAPHY:—*G. R. Anderson.*

Departments 1 and 4, III Year; Departments 3 and 7, IV Year.

The camera and its adjustments, lenses, shutters, screens. Plates for various purposes, films, prevention of halation. Lighting, exposure, development. Paper of various kinds, printing, enlargement and reduction, blue printing and allied processes. Record photography, photogrammetry and photo-surveying. Photography in colour.

Lectures Fall term, and laboratory work both terms.

### SURVEYING.

205. SURVEYING:—*S. R. Crerar.*

Departments 1 and 2, I Year; 1 hour per week; both terms.

The lecture course includes the general principles; surveying with the chain, the compass and chain and the transit and chain; the applications of trigonometry to inaccessible heights and distances; mensuration of surfaces and solids, co-ordinate surveying, division of land, etc.

Text books:—*Land Surveying—Gillespie; Theory and Practice of Surveying—Johnson.*

206. FIELD WORK:—*S. R. Crerar.*

Departments 1 and 2, I Year; 9 hours per week; first term.

This course comprises testing chains; practice in chaining; a complete survey of a piece of land with the chain; keeping of field

notes; the use of the compass and transit in surveying closed figures and traverse lines and in ranging straight lines; plotting by latitudes and departures, and otherwise computing areas.

207. SURVEYING:—*W. M. Treadgold.*

Departments 1 and 2, II Year; 1 hour per week; both terms.

This course of lectures takes up in detail, simple, reverse and compound curves as applied to railroad surveying. It also includes stadia, plane table and photographic surveying as applied to topographic work, and also the main features of mine and hydrographic surveying.

Text books:—Henck, Shunk, Searles, Allen (Field books for Engineers) Theory and Practice of Surveying—Johnson; Plane Surveying—Raymond.

208. FIELD WORK:—*W. M. Treadgold, E. W. Banting.*

Departments 1 and 2, II Year; 9 hours per week; first term.

This course of instruction embraces all adjustments of the transit, accurate determination of angles of closed figure, minor problems in triangulation—ordinary and special problems as applied to railroad work in regard to curves, simple, reverse and compound, profile levelling and plotting of profile.

209. SURVEYING AND LEVELLING:—*W. M. Treadgold.*

Departments 1 and 2, III Year; 1 hour per week.

This course of lectures takes up the work of the railroad engineer on construction, including profiles, cross sectioning, computation of volume of earthwork, overhaul, transition curves, laying out turnouts, frogs and switches, etc.

Also a discussion of trigonometric and barometric levelling.

Text books:—Field Engineering—Searles; Railroad Curves and Earthworks—Allen.

210. FIELD WORK:—*W. M. Treadgold, E. W. Banting.*

Departments 1 and 2, III Year; about 9 hours per week; first term.

This includes adjustments of levels and accurate check differential levelling, determination of profile, cross sectioning and computation of earthwork of located line on ground and plotting of same; also cross sectioning by use of hand level. A complete stadia topographic survey is made and plotted.

**ADDITIONAL, FOURTH YEAR OPTIONS.**

211. RAILWAY ENGINEERING:—*W. M. Treadgold.*

Department 1, IV Year; about 2 hours per week.

The object of this course is to make the student acquainted with the general principles of railroad and street railway engineering, and

the subject will be studied from the standpoint of economic theory of location; train resistance; effect of grade, distance and curvature and rise and fall; maintenance of way; yards and terminals; tunnels, and street railway practice.

**212. FIELD WORK:—***W. M. Treadgold.*

Department 1, IV Year; about 11 hours per week; first term.

The work consists of an original survey for a railroad some one or two miles in length, the work being conducted according to the most modern methods of location. Upon the completion of this work a contour map of the district surveyed is plotted in the drafting room and a line adjusted to it. This is staked out in the field, profiles taken and complete estimates of the cost of construction made.

**213. SANITARY ENGINEERING.**

*Sanitary Chemistry* (113).

*Advanced Biology* (63a).

*Bacteriology* (64).

*Hydraulics* (32b).

*Sanitary Engineering*:—A lecture course of 1 hour per week, both terms, in which consideration is given to the problems of water supply and sewage disposal as viewed by the engineer. Some practice in the design of works from assumed data is afforded.

Reference books:—Sewage Disposal—Kinnicutt, Winslow & Pratt;  
Sewage Disposal—Fuller; Water Supplies—Turneure & Russell.

**214. HIGHWAY ENGINEERING:—**

Department 1, IV Year.

A lecture and laboratory course of about 8 hours per week, dealing with materials, design and construction of highways and pavements and the testing of various materials used in such work.

**215. STRUCTURAL ENGINEERING:—**

Students in Civil Engineering who desire to specialize in the subjects best fitting them for designing or constructing engineers on bridge-building or other analogous work, may do so by selecting the Structural Engineering Option in the fourth year. In addition to the obligatory subjects, the following lecture and laboratory courses are provided for those selecting this option:

*Theory of Structures* (16).

*Strength and Elasticity of Materials* (17)

*Iron and Steel* (23).

*Reinforced Concrete* (22).

*Structural Design* (51).

*Mill Building Design* (24).

*Miscellaneous Structures* (24a)

**216. ARCHITECTURAL ENGINEERING:—**

Architectural students desiring to give special attention to the structural design of buildings may do so by electing to take the Architectural Engineering Option in the fourth year. The following subjects, in addition to those required of all students in the fourth year in Architecture, are required:

*Structural Design* (51).

*Mill Building Design* (24).

*Architectural Design* (48a).

**MODERN LANGUAGES.**

**217. FRENCH:—***P. Balband.*

Required in Department 4, optional in Departments 1, 2, 3 and 7, I and II Years; 1 hour per week; both terms.

An elementary course intended to train the student in the translation of scientific journals and treatises.

**218. GERMAN:—***G. H. Needler, P. W. Mueller.*

Required in Departments 5 and 6, all years, optional in Departments 1, 2, 3 and 7, I and II Years; 1 hour per week; both terms.

An elementary course intended to train the student in the translation of scientific journals and treatises.

**THESIS.**

**9. THESIS.**

Required in all Departments, IV Year.

Each student is required to prepare a thesis of between six thousand and seven thousand words on a subject approved by Council. See circular of information.

**VACATION WORK.**

**220. CONSTRUCTION NOTES.** See special circular of information.

**OUTLINE OF VACATION WORK****CONSTRUCTION NOTES.****II and III Years.**

The construction notes required consist of neat and complete dimensioned sketches in pencil of any structures, machines or plants which may be of interest. Any object chosen should be represented and dimensioned in such a manner that it could be completely constructed from the notes as the only available information.

From students in Department 2, who have been actually engaged during the summer with Government or other approved geological survey parties, geological field notes will be accepted in lieu of construction notes.

**MASTER OF APPLIED SCIENCE DEGREE.**

1. A candidate for the degree of Master of Applied Science (M.A.Sc.) shall hold the degree of Bachelor of Applied Science (B.A.Sc.) of this University.
2. He shall spend not less than one academic year in attendance as a student, in the Faculty of Applied Science, on a course of study approved by the Council.
3. He shall present a satisfactory thesis on a subject approved by the Council.
4. He shall pass such examinations as the Council may decide.
5. The candidate must register at the beginning of the academic year.

**PROFESSIONAL DEGREES.**

The attention of graduates is directed to the following regulations respecting professional degrees.

The following degrees have been established: Civil Engineer (C.E.), Mining Engineer (M.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), Chemical Engineer (Chem.E.), subject to the following regulations:

1. A candidate for one of the said degrees shall hold the diploma of the School of Practical Science or of the Faculty of Applied Science and Engineering and the degree of Bachelor of Applied Science except in the case provided for in clause 11 hereunder.
2. He shall have spent at least three years after receiving the degree of Bachelor of Applied Science in the actual practice of the branch of engineering wherein he is a candidate for a degree.
3. Intervals of non-employment or of employment in other branches of engineering shall not be included in the above three years. It shall not be necessary that the several periods requisite to make up the said three years be consecutive.



4. Satisfactory evidence shall be submitted to the University examiners as to the nature and length of the candidate's professional experience for the purpose of clauses 2 and 3.

The Examiners shall satisfy themselves by oral or written examinations in regard to the candidate's experience and competence.

5. The candidate shall prepare an original thesis on some engineering subject in the branch in which he wishes a degree, the said thesis to be accompanied by all necessary descriptions, details, drawings, bills of quantities, specifications and estimates.

The candidate may be required at the option of the Examiners to undergo an examination in the subject of this thesis.

6. Notice in writing shall be sent to the Secretary not later than the first day of February, informing him of the degree to which the candidate wishes to proceed and of the title of his proposed thesis for the approval of the Examiners.
7. The evidence under clause 4, and the thesis, with accompanying papers, described in clause 5, shall be sent to the Secretary not later than the first day of April.
8. The candidate shall be required to present himself for examination in the month of April at such time as may be arranged by the Examiners.
9. The fee for any one of the said degrees shall be twenty dollars, and shall be paid to the Bursar not later than the first day of April.
10. The thesis, drawings, and other papers submitted under clause 7 shall become the property of the University.
11. Candidates who graduated from the School of Practical Science before June, 1905, shall not be required to hold the degree of Bachelor of Applied Science.

#### **EXTRACTS FROM SURVEY ACTS.**

##### **From the Ontario Act Respecting Land Surveyors and Survey of Lands (R.S.O.).**

"26. Any person serving as an apprentice as hereinbefore provided, may, with the permission of the Board of Examiners, attend the Ontario School of Practical Science, or any school, college or university, the course of study in which is, in the opinion of the Board, sufficiently similar to that in the Ontario School of Practical Science, for the purpose of taking any course of study which includes any subject required for the final examination for admission to practise as a land surveyor, but the total period of such apprenticeship and of course of study shall not exceed the

period of four years from the date of the articles of apprenticeship as above mentioned, and not less than three years of the said period of four years shall be passed in the actual service of a practising Ontario Land Surveyor.

\* \* \* \* \*

"28. The privilege of a shortened term of apprenticeship shall also be accorded to any graduate of the Royal Military College at Kingston or of the Ontario School of Practical Science in civil engineering or in mining engineering, or of the McGill College, Montreal, in civil engineering or in mining engineering, and such person shall not be required to pass the preliminary examination hereinbefore required for admission to apprenticeship with a land surveyor, but shall only be required to serve under articles with a practising land surveyor duly filed as required by section 32 of this Act, during twelve successive months of actual practice, after which, on complying with all the other requirements, he may undergo the examination prescribed by this Act.

"29. Such person at any time during his apprenticeship may, with the permission of the Board of Examiners, attend the Ontario School of Practical Science, or any school, college or university, the course of study in which is, in the opinion of the Board, sufficiently similar to that in the Ontario School of Practical Science, for the purpose of taking any course of study which includes any subject required for the final examination for admission to practise as a land surveyor, but the total period of such apprenticeship, and of course of study, shall not exceed the period of two years from the date of the articles of apprenticeship as above mentioned, and not less than twelve months of the said period of two years shall be passed in the actual service of a practising Ontario Land Surveyor."

#### **From Act Respecting Manitoba Land Surveyors.**

"28. (1) The privilege of a shortened term of apprenticeship shall be accorded to graduates of the Royal Military College of Canada and to graduates in civil engineering of the University of McGill College of Montreal, the School of Practical Science of Toronto, the School of Mining at Kingston, and graduates of Manitoba University who have taken first or second class honours in the special course in mathematics; and such graduates shall not be required to pass the preliminary examination hereinbefore prescribed for admission to apprenticeship with a land surveyor, but shall only be required to serve under articles with a practising land surveyor, duly filed as required by section 24 of this Act, during twelve successive months of actual practice of which at least six months shall be at actual practice in the field, after which, on complying with the other requirements of this Act, he may undergo the examination for commission to practise prescribed by this Act."

**From British Columbia Land Surveyors' Act, 1905.**

"52. Whosoever shall have followed, during at least two years, a regular course of studies in all the branches of the sciences required by law in order to be received as a land surveyor; who has attended the lectures of a British university or college where a complete course of theoretical and practical instruction is given in civil engineering, physics, and all other branches of sciences required by law in order to be admitted as a land surveyor, and who has received from such university or college, after a regular examination, his diploma or degree of a civil engineer or land surveyor, on satisfying the Board that he is duly qualified as aforesaid, may, without undergoing the examination for admission to the study of land surveying, be received as a student by any member of the Corporation practising in this Province, and shall be bound to perform only twelve months' actual service in the field as such, or, if he has obtained his degree or diploma as a civil engineer or land surveyor in less than two full years, then only such time of service which, added to the time he has devoted to his course of studies, shall complete the period of three full years; and, at the expiration of the said active service, such person, on complying with the other provisions of this section, shall have the right to present himself and undergo the examination required by law, and, if qualified, to be admitted to practise as a land surveyor for the Province as if he had served his three full years under his indentures with a practising land surveyor; but instead of paying fifty dollars he shall be obliged to pay sixty dollars as fees for his examination and commission as land surveyor."

*The above section is to be taken collectively as a whole. No separate clause or sentence can be applied to any particular case.*

**From the Dominion Lands Act, 1908.**

"Every graduate in surveying of the Royal Military College of Canada, and every person who has followed a regular course of study in all the branches of education required by this Act for admission as a Dominion land surveyor, for at least two years, in any college or university where a complete course of theoretical and practical instruction in surveying is organized, and who, after examination, has thereupon received from such college or university a diploma or certificate, shall be exempt from serving three years as aforesaid, and shall be entitled to examination for a commission after being admitted upon examination as aforesaid as an articulated pupil and serving one year under articles with a Dominion land surveyor, including six months' actual practice with him in the field, on producing an affidavit from the said surveyor in said Form C, together with his own affidavit in said Form D, that he has served for one year as herein provided; but it shall rest with the Board to decide whether the course of instruction in such college or university meets the requirements of this section."

**EXTRACT FROM THE ONTARIO ARCHITECTS' ACT.**

"Any student who has matriculated in Arts in any university in His Majesty's dominions, or in the Ontario School of Practical Science, shall not be required to pass the preliminary examinations.

"23. Any person who applies for admission to registration as an architect after the coming into force of this Act, shall not be less than twenty-one years of age, shall have served as a student not less than five years with a principal or principals entitled to register under this Act, or with any other principal or principals approved by the Council, and have passed such qualifying examinations as may be required by this Act.

"24. (3) Any person who has graduated from the Ontario School of Practical Science shall be required to serve only three years as a student, one of which three years may be served during the vacation of such school.

"(4) Upon and after the passing of this Act, students shall serve such term as is required to be served by the provisions of this Act, under indenture to a registered architect, which indenture and any assignment thereof with affidavit of execution thereto attached shall be filed with the Registrar upon payment of such fees as the Council may by regulation direct."



## LABORATORY EQUIPMENT.

### THERMODYNAMIC AND MECHANICAL LABORATORY.

The University in 1909 completed the erection of a large, well-equipped building for the accommodation of the steam, gas, mechanical and hydraulic laboratories. A more complete description of the laboratories has been published elsewhere, so that the present description is only intended to give the main features.

The part of the building set apart for thermodynamics and other mechanical work is the ground floor of a room 60 ft. x 155 ft. This room is lighted entirely from the roof in a very perfect way. A part of the space 40 ft. wide running the entire length of 155 feet is served by a 3-ton travelling crane and contains the following equipment:

50 h.p. Brown engine with separate jackets on both heads and barrel of cylinder.

Two-stage Rand air compressor having compound steam cylinders, each fitted with Meyer cut-off gear. The low pressure air cylinder has Corliss inlet gear.

30 h.p. high-speed Leonard tandem compound engine with shaft governor.

15 h.p. high-speed McEwen engine.

75 h.p. two-line compound Willans engine.

15 h.p. DeLaval turbine with special nozzles for condensing and non-condensing tests.

Two 15 h.p. Leonard engines with different types of valves, which are used for valve setting.

There are also two surface condensers with air pumps so arranged that any engine in the laboratory may be made to exhaust into the atmosphere through an open heater or into one of the condensers, the change from one arrangement to the other being accomplished in a few minutes without the aid of valves.

The laboratory further contains:

A 3-ton York refrigerating machine with tanks.

An Amsler transmission dynamometer.

Apparatus for testing injectors and steam pumps.

Numerous other pieces of apparatus and instruments.



The work on internal combustion engines and producers is performed on the following:

18 h.p. Canada suction gas producer.

14 h.p. National gas engine arranged for various compressions and points of ignition.

10 h.p. Fielding and Platt engine for city gas or coal oil, having various adjustments.

8-h.p. Otto gas engine.

6 h.p. marine gasoline engine.

Ericsson air engine.

Various accessories to above machines.

Steam for the laboratory is supplied by two 50 h.p. and one 100 h.p. Babcock and Wilcox boilers, the latter having an internal superheater. These boilers are located in a separate boiler room. They are used for experimental work only and are fitted up for testing. The gases pass up through two independent chimneys, and these have been arranged so that the draft and other conditions in the chimney at any point of its height may be examined.

In smaller work-rooms off the main laboratory are placed belt and oil testing machines, apparatus for testing the efficiency of gears and machines, and for experiments in the balancing of machinery.

### HYDRAULIC LABORATORY.

The hydraulic laboratory occupies two floors each 40 feet x 112 feet, which are well lighted by large windows on the side and end.

The water for the experimental work is pumped through the various pieces of apparatus from a well by means of two turbine pumping units, both of which are driven by a Belliss and Morcom compound engine of 125 h.p. running at a speed of 525 revs. per minute. Both engine and pumps have been installed with a view to using them in experimental work as well as for supply of water for other apparatus used in the laboratory.

The pumping units are capable of delivering one cubic foot of water per second against heads of 250 feet and 300 feet respectively. These units are designed and connected up so that they may be run in series giving the above discharge at 550 feet head, or they may be run in parallel giving double the discharge at a lower head. Each pumping unit consists of two two-stage pumps mounted on a common base and driven by a single pulley, and the construction and piping are such that each two-stage pump may be driven separately or that all may be driven at once, discharging separately one cubic foot per second at about 125 feet head through each of four independent pipes, or else the pumps may be run in series or in parallel. The scheme is thus well adapted to laboratory work, and under the heads used on reaction turbines about six cubic feet per second may be obtained.

The laboratory further contains a large vertical steel tank  $5\frac{1}{2}$  feet diameter by 34 feet high with arrangements for the attachment of nozzles and other mouthpieces, etc. Connections are also arranged for reaction turbines, the tank acting as a reservoir.

The discharge from the turbines or nozzles is measured in a weir tank nearly 6 feet wide and 21 feet long, containing a contracted weir  $4\frac{1}{2}$  feet wide. This weir may be calibrated by two weighing tanks, each having a capacity of about 240 cubic feet.

There are three reaction turbines and two impulse wheels all ready for experiment, the power being measured by brakes and the water by weir or orifices. Amongst the reaction turbines may be mentioned the one designed and built by Escher Wyss & Co., specially for the laboratory.

Smaller orifice and weir tanks, each about  $3 \times 3 \times 12$  feet with necessary measuring tanks, are arranged for instruction in coefficients of various kinds and practice with weirs and orifices.

A Venturi meter and other meters, also an hydraulic ram and similar devices are available for testing, and good facilities have been arranged for investigating friction and other properties of pipes and fire hose.

For special investigations on turbine and centrifugal pumps, other pumps in addition to those already described have been arranged.

The basement of the laboratory contains an open trough 5 feet wide, about 110 feet long, with a large weir at one end. It is intended to use this trough for experiments on the flow in open channels, for measurements of large discharges by means of the weir, and for experiments with current meters and Pitot tubes.

Numerous pieces of smaller apparatus, together with all instruments required, have also been provided, and the laboratory equipment is believed to be very complete.

#### **DONATIONS TO THE THERMODYNAMIC AND HYDRAULIC LABORATORIES.**

The following donations to the equipment of the laboratories have been made through the kindness of those mentioned:

50 h.p. Wheeler Surface Condenser, presented by Mr. F. M. Wheeler, New York.

Blake Feed Pump, presented by the manufacturers.

6-inch New American Turbine, presented by Wm. Kennedy & Sons, Owen Sound, Ont.

Two Crown Water Meters, presented by the National Meter Co., New York, through Mr. M. Warnock, Toronto.

Rock Drill, presented by Sullivan Machinery Co., New York, through Mr. A. E. Blackwood, '95.

Marine Gasoline Engine, presented by Canadian Fairbanks Co., Montreal.

Two engines with different types of valve, presented by Messrs. E. Leonard & Sons, London, Ont.

Bundy trap from American Radiator Co., through Messrs. Russell & Gifford.

Dunham steam trap from C. A. Dunham Co.

Sectional models of valves from American Radiator Co.

Sectional model Mason Reducing Valve by Russell & Gifford.

Tanks, etc., by John Inglis Co. Pressure Fan from Sheldons Ltd., Galt.

In addition to the above, other firms have materially assisted by offering apparatus at or below cost price, among whom may be specially mentioned, The Canadian Rand Drill Co., Sherbrooke, Quebec.

### PHYSICAL LABORATORIES.

The optical laboratory is equipped with Weinhold optical benches and accessories for determining the constants of mirrors and lenses and for demonstrating the construction and use of telescopes, field glasses, microscopes, etc. There is also a full equipment of optical instruments, including telescopes, microscopes, field glasses, comparators, spectrometers, level tester, photometers of various types, focometer, dynamometer, cathetometer, polariscope, projecting lanterns, etc.

The photographic laboratory is supplied with cameras for viewing, copying, enlargement and reduction, a spectroscopic camera and an electric blue printing machine and the necessary dark-rooms.

The hydrostatic laboratory contains a supply of various forms of hydrometers, hydrostatic balances, Jolly balance, Mohr's balance, hydrostatic press, vacuum pumps, gauges, etc.

The heat laboratory is equipped with a full supply of calorimeters and accessories for determinations of latent and specific heat, expansion apparatus, air thermometer, apparatus for verification of Boyle's law and pressure and boiling point curve, and for determination of the absolute expansion of mercury. Callendar's apparatus for determination of the mechanical equivalent of heat.

The acoustical laboratory is provided with sonometer, siren, forks ordinary and electric, Lissajous' and Melde's apparatus, organ pipes of various forms, manometric flame apparatus and a special equipment for work in architectural acoustics consisting of torsion chronograph, electropneumatic wind chest and standardized organ pipes and other accessories.

**ELECTRICAL LABORATORIES.**

**Galvanometer laboratory.**—The equipment of this laboratory is, in part, as follows: A set of D'Arsonval galvanometers conveniently located at tables about the laboratory, a set of resistance boxes for use with the same; measuring instruments, including ammeters, voltmeters, wattmeters, potentiometers and standard cells. Apparatus for the measurement of low resistance, including a ductor, and for high resistance, including a megger; several Carey Foster outfits and a Roller bond tester. There are also experimental lines for practice in locating faults, photometer outfits with rotating devices and various types of arc lamps.

Another room is fitted more especially for calibration of electrical instruments for alternating and direct currents. About one hundred and twenty portable measuring instruments are available for students' use, also standard instruments, including Weston laboratory standards, Kelvin balances and a Wolff potentiometer, with which the portable instruments may be compared.

**Machine laboratory.**—This laboratory, occupying two large rooms, contains twenty-five dynamos and motors varying in capacity from two to twenty kilowatts, adapted for experiments illustrating the properties of compound, shunt and series dynamos and motors, arc machines, as well as the use of interpoles. Switch-boards, numerous rheostats, lamp racks, starting boxes, circuit breakers, flexible cables, brakes, torsion dynamometers, tachometers, etc., are available for use with the machines.

This laboratory also contains two 15 kw., 25 cycle and two special 15 kw., 60 cycle General Electric polyphase revolving field alternators direct driven by motors, two  $7\frac{1}{2}$  kw. alternators, two rotary converters of 10 kw. and 5 kw. capacity, a  $7\frac{1}{2}$  kw. General Electric polyphase induction motor with slip ring rotor, Westinghouse three-phase squirrel cage induction motors, Wagner single phase motor and unity power factor motor, Swedish General Electric variable speed motor, Westinghouse single phase series motor, Westinghouse alternator, and several three phase and single phase induction motors; also transformers, reactive coils, and other details, as in the direct current sections of the laboratory described above, for experiments on the properties of alternating currents and alternating current apparatus in general. A constant-current transformer with its load of six series arc lamps, a three-element oscillograph, for studying wave forms, a high potential transformer and a mercury arc rectifier may also be mentioned. The students are supplied with Weston, Westinghouse and Thomson portable instruments for measuring purposes.

A motor generator set has been installed, comprising a 65 h.p. motor driving on the same shaft a 30 kw. 110 volt d.c. generator and a 30 kw. 60 cycle 110 volt alternator with direct connected exciter.



Magnetic laboratory.—A room is fitted with appliances for the study of saturation and hysteretic properties of samples of iron and steel, as well as a transformer for determining dielectric strength. The room also serves for exercise in winding models of armatures.

### **CHEMICAL LABORATORIES.**

The Chemical laboratories are situated in the western half of the Chemistry and Mining building, on the first and second floors. The rooms are large and well lighted, and are supplied with the usual modern equipment.

The first and second year laboratory for qualitative work has accommodation for 112 students, each working space being supplied with water, gas and fume cupboard. The laboratory for quantitative analysis will accommodate 48 students, and is supplied with commodious fume cupboards and all necessary apparatus. A laboratory with working places for 36 is provided for the students engaged in the study of technical chemistry; it is equipped with appliances for the preparation and testing of chemical products. A laboratory for fourth year students with accommodation for eight workers has been fitted up. Each of these laboratories has its own balance room adjoining furnished with instruments from the best makers and adapted to the particular objects in view.

In addition there are rooms set apart for gas analysis, electrolytic analysis and a specially constructed fireproof laboratory for combustion, crucible and bomb furnaces. A calorimeter room has been equipped in the basement. Each of these laboratories is supplied with apparatus of the most approved design, providing excellent facilities for the prosecution of work in analytical and technical chemistry.

### **ELECTROCHEMICAL LABORATORIES.**

The Electrochemical laboratories, which are situated in the Chemistry and Mining building, are provided with special facilities for electrolytic work, including a large storage battery and electroplating dynamo with tanks as well as a complete set of apparatus and electrical measuring instruments. The experimental work on electric furnaces is performed in two rooms specially equipped for this purpose with rheostats and switch-board connections to a 120 kw. d.c. generator which supplies the current required.

### **ASSAYING LABORATORIES.**

Two assaying laboratories are situated in the basement of the Chemistry and Mining building. One has a floor space of 17 feet x 47 feet, and the other 28 feet x 37 feet. Adjoining each is a room 15 feet x 11 feet, with the necessary equipment for the wet work in connection with assaying. Common to both laboratories is a balance room furnished with gold balances set on a concrete pier. Each of the laboratories contains a number of



melting holes for crucible fusions, various gas furnaces both for crucibles and muffles, and two large brick muffle furnaces.

The furniture comprises lockers for the students, tables for the pulp balances and the necessary cabinets and shelving.

Adjoining the assay laboratories is a preparation room (19 feet x 13 feet) which is equipped with a motor, crusher, pulverizer, sample grinder and all the necessary hand pulverizers, screens, etc., for preparing ores for assay.

### **METALLURGICAL LABORATORY.**

This laboratory is located on the basement floor of the Mining Building. The main room has a floor space of 1,600 square feet. The equipment consists of: Two copper blast furnaces, acid lined copper converter, an American Gas Company muffle roasting furnace, a Hoskins resistance furnace for high temperature work, an Abbey ball mill, tanks for electrolytic refining and precipitation, together with several small furnaces of various types. Facilities for testing coal, pyrometric work, flue gas analysis are also provided.

There is also a laboratory with a floor space of 900 square feet for the testing of clays. The equipment, part of which is in the main Metallurgical laboratory, consists of: A large revelation kiln, down draft gas fired kiln and muffle kiln, dry pressed brick press, tile and hollow ware press. There is a large ore and apparatus storeroom and locker room with shower bath for students.

### **MILLING AND CONCENTRATING LABORATORY.**

A detached building, 72 feet x 70 feet in area, contains the milling and concentrating equipment. It is heated, lighted and supplied with power from the main building, and is divided into two parts. The greater part, with 72 feet x 53 feet floor space, and 22 feet high, contains the milling and concentrating equipment. The machinery for the former operations consists of a five-stamp battery erected on concrete foundations, Challenge ore feeder, amalgamating plates, Wilfley table, a clean-up pan, steel settling tanks, a steel tank suspended from the roof girders to furnish a constant supply of water, and a track with travelling crawl to transport ore. This is driven by a 15-horsepower motor.

The concentrating part consists of a set of five revolving trommels for wet screenings, four three-compartment jigs, a trough classifier delivering three products, and two revolving buddles, Wilfley Slimer, Deister Slimer, Richard's Pulsating Classifier, Richard's Pulsating Jig, a dry sizer, besides experimental apparatus of various kinds for experimenting on the falling rates of ore particles, the settling of slimes, surface tension action in grease and flotation methods, etc. The waste products run to the same settling tanks as the tailings from the stamp battery. The ore is handled by a travelling crawl. All the machinery in this part is driven by a 10-horsepower motor.

The lower floor has been fitted up for lixiviation work with apparatus for the treatment of sands and slimes, different types of filter press, vacuum plant agitators, etc.

The plant throughout is intended mainly for experimental purposes and is made of such a size that numerous experiments can be carried out on small quantities of ore. Tests can also be made on lots of one or two tons.

The other part of the milling building with 72 feet x 17 feet floor space and 15 feet high is divided into four separate rooms. The largest of the four rooms has an area of 476 square feet and is devoted to the crushing and pulverizing of the ores preparatory to their treatment in the milling and concentrating room. It is isolated in order to confine the dusty operations as far as possible to this one room, and is equipped with a gyrating crusher of Hadfield's make, a set of Hamilton rolls 16 inches by 12 inches, platform scales for weighing ore, a jib crane, pulleys, buckets, etc., for handling the rock. An adjoining room contains a 30 h.p. motor for driving the machinery of the crushing department, and storage bins for ore, work bench, etc. Another room with 17 feet x 15 feet floor space is furnished with a magnetic separator of the Rowan-Wetherill type, driven by its own motor.

### **STRENGTH OF MATERIALS LABORATORY.**

This laboratory is intended for the scientific and commercial testing of materials of construction such as iron, steel, timber, concrete and masonry.

It is supplied with the following:

An Emery 50-ton hydraulic machine, built by Wm. Sellers & Co., of Philadelphia, for making tests in tension and compression.

A 100-ton screw power machine, built by Riehle Bros., Philadelphia. It is designed for making tests in tension, compression, shearing and cross-breaking, and will take in posts 12 feet long and beams up to 18 feet in length.

A Riehle 10-ton screw power universal testing machine.

A Riehle 50-ton screw power universal testing machine.

A 15-ton single lever-machine, built by J. Buckton & Co., Leeds, England.

A torsion machine, built by Tinius Olsen & Co., Philadelphia, for testing the strength and elasticity of shafting. This machine will twist shafts up to 16 feet in length and 2 inches in diameter.

A hand power torsion machine of simple mechanical construction, specially designed for the testing of short shafts of a maximum diameter of one inch.

A Riehle transverse testing machine of 5,000 pounds capacity, adapted to specimens up to 48 inches in length.

A Riehle compressometer, with spherical seat attachment for the adjustment of specimens having slightly non-parallel faces. This compressometer will receive specimens up to 10 inches in length.

An Olsen compression micrometer of standard type.

A 20,000 pound Olsen, hand power, wire testing machine, specially fitted for testing wooden columns with both fixed and pivoted ends.

A Riehle abrasion cylinder, built to the standard required by the National Brickmakers' Association, adopted in 1901.

A Page Impact Machine for testing the toughness of road metals.

A diamond core-drill for preparing specimens for the Page impact machine.

A two-cylinder Deval abrasion machine for testing the wear-resisting properties of road materials.

A Berry strain-gauge for spans of 3 inches and 8 inches.

A Nalder dividing engine. This may be used either for the precise division of scales or for the calibration of instruments intended for refined measurements.

A large number of extensometers of the usual degree of precision. These include the Bauschinger, Martens, Unwin, Ames, Riehle, Johnson, Henning (recording) and other types. In addition there are the usual scales, micro-meters, telescopes and reflectors, voltmeters for the determination of metallic contact, and such other appliances as are necessary in the making of precise measurements.

The shop is equipped with a number of high-class machine tools specially fitted for reducing the specimens to the requisite shapes and dimensions with a minimum of hand labour. It is also supplied with the necessary appliances for making ordinary repairs and for making apparatus for special experiment and original investigation.

### CEMENT TESTING LABORATORY.

This laboratory is fitted with all the ordinary moulds, sieves, balances, burettes, steaming and drying tanks, tables, and other appliances necessary in making the usual physical tests of a Portland cement. It is also supplied with completely equipped cabinets for individual work. In addition there are the following:

A Riehle 2,000 lb. machine fitted for either tension or compression.

A 2,000 lb. Riehle shot machine for tension.

A 2,000 lb. Fairbanks shot machine for tension.

A 1,000 lb. Olsen automatic shot machine fitted for tests in either tension or cross breaking.

An Olsen soapstone moist closet of modern design.

### METROLOGICAL LABORATORY.

The department of surveying and geodesy is provided with all the ordinary field instruments, such as transits, levels, compasses, micrometers, sextants, planimeters, plane tables, tapes, chains, etc., with which is carried on the instruction in practical field operations as detailed elsewhere.

A small laboratory is also established in the basement of the observatory described below, containing the necessary instruments for the refined measurements of geodetic surveying; a standard yard and metre, a Rogers 10-foot comparator, an invar base measuring apparatus, a Kater's pendulum with vacuum chamber, a level trier, micrometer microscopes, etc.

The geodetic observatory in connection with this department is used for the instruction of students of the Fourth Year in taking observations for time, latitude, longitude, and azimuth by the precise methods used in connection with a geodetic survey. It contains a 10-inch theodolite and zenith telescope by Troughton & Simms; an astronomical transit instrument and an 8-inch theodolite by Cooke; two electro-chronographs; a Howard astronomical clock; a Dent sidereal break-circuit chronometer; arithmometers, etc.

### **GEOLOGICAL AND MINERALOGICAL LABORATORIES.**

In the Chemistry and Mining building on College Street the University possesses a modern laboratory for Geology and Mineralogy.

Courses are given in laboratory work, especially in personal examination of type sets of rocks, fossils, minerals and crystal models. These laboratory exercises serve to illustrate the introductory didactic instruction.

For the encouragement of pure crystallography the laboratories are supplied with goniometers of the various types, crystal models, appliances for the cutting of oriental crystal sections and for the physical examination of the same. Practical petrography is carried on in rooms provided with type sets of rocks, both macroscopic and microscopic. Advanced students are taught to make thin sections of rocks and fossils and to study them microscopically. For students in Mining a laboratory course in the interpretation of geological maps and sections is provided. Typical mining regions are studied in detail and an opportunity is afforded for the examination of specimens illustrating economic geology.

The laboratory for the preparation of thin sections of rocks, minerals and fossils is provided with electric diamond saws and grinding appliances for the various types of work incidental to the preparation of thin sections and museum material.

A room is also provided for advanced work in cartography and geological surveying.

The departments possess 28 petrological microscopes and 5 of other types, so that it is now possible to provide advanced students with instruments and sets of thin sections for their own especial use. The blowpipe laboratory contains 156 lockers, especially designed for apparatus for students.



### MUSEUM.

The Geological and Mineralogical Museum of the University is open to students of the Faculty of Applied Science from 9 a.m. to 5 p.m. throughout the year.

The Museum is situated in the south-east corner of the ground floor of the Chemistry and Mining building.

The collections are restricted to such material as may serve to illustrate the courses of lectures given to undergraduate students in the Faculty of Applied Science. There are accordingly contained in this museum only the commoner rocks, minerals, fossils and ores.

### LIBRARY.

Rooms have been set apart in the Engineering and the Chemistry and Mining buildings for the housing of such periodicals and other literature of the University Library as is of special interest to the students of this faculty.

### LODGING AND BOARD.

Accommodation is readily obtainable in numerous private boarding-houses within convenient distance of the University, at a cost of from four dollars and a half a week upwards for comfortable lodging with board; or rooms may be rented at a cost from one dollar and a half per week upwards, and board obtained separately at moderate rates. A list of accredited boarding-houses is kept by the Secretary of the University Young Men's Christian Association, and students are recommended to consult him with reference to the selection of suitable accommodation.





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**FACULTY OF HOUSEHOLD SCIENCE.**

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## COUNCIL OF THE FACULTY OF HOUSEHOLD SCIENCE.

*President*. . . . . ROBERT ALEXANDER FALCONER, C.M.G., LL.D., D.LITT.

*Chairman*. . . ARCHIBALD BYRON MACALLUM, PH.D., SC.D., LL.D., F.R.S.

CLARA CYNTHIA BENSON, B.A., PH.D.

THOMAS GREGOR BRODIE, M.D., F.R.S.

ANNIE LEWISA LAIRD.

WILLIAM ROBERT LANG, D.Sc., F.I.C.

ARCHIBALD BYRON MACALLUM, PH.D., SC.D., LL.D., F.R.S.

JOHN CUNNINGHAM MCLENNAN, B.A., PH.D.

THE PROFESSOR OF BIOLOGY.

THE LIBRARIAN OF THE UNIVERSITY.

*Secretary*. . . . . MISS C. C. BENSON.

## HOUSEHOLD SCIENCE COURSES.

The University offers Courses which lead to the degree of Bachelor of Arts, and Courses for students who do not wish to take work leading to a degree but who desire a general knowledge of Household Science. Such are called "occasional students", and the short courses, 11 to 18 inclusive, have been especially arranged for them.

The courses which lead to the Bachelor of Arts degree are the Household Science Course, the Physiology and Household Science Course, and the General Course, which includes options in Household Science. These are fully described in the Arts Calendar, and further information about them (entrance requirements, curricula, fees, etc.) may be obtained from the Registrar of the University.

# COURSES OF INSTRUCTION.

## HOUSEHOLD SCIENCE.

*Associate Professor of Household Science:*

MISS A. L. LAIRD.

*Lecturer in Household Science:*

MISS E. M. EADIE.

*Instructors in Household Science:*

MISS N. L. PATTINSON.

MISS H. A. PAUL.

MISS L. L. OCKLEY.

MISS L. DENNE.

1. HISTORY OF HOME LIFE.—A course of lectures one hour a week throughout the session.

2. HOUSEHOLD MANAGEMENT.—A course of six hours a week throughout the session. This includes (a) a study of metals, woods, fabrics, etc., used in the home, and the principles underlying their care; (b) the house; (c) the home care of the sick.

3. FOODS AND FOOD VALUES.—A course of ten hours a week throughout the session—lectures and laboratory work.

4. FOODS.—A course of four hours a week throughout the session—lectures and laboratory work.

5. ECONOMICS OF THE HOUSEHOLD.—A lecture course of two hours a week throughout the session. It includes the economics of spending, the division of the income, etc.

6. DIETETICS.—A lecture course of two hours a week throughout the session. Methods of investigating the kind and amount of food required under varying conditions are discussed. Practical application of this knowledge is made in the construction of dietaries for different classes of people.

7. An advanced laboratory course of six hours a week throughout the session. It includes practice in marketing and in preparing meals and special diets. Each student is given the opportunity to investigate special problems bearing on her work.

8. **FOODS.**—A course of four hours a week throughout the session. This is a continuation of Course 4, and includes practice in preparing meals and special diets.

9. **Household Science for General Course students.** A course of two hours' lecture and four hours' laboratory work a week throughout the session.

10. **Household Science for General Course students.** A course of two hours' lecture and four hours' laboratory work a week throughout the session. This is a continuation of Course 9.

#### COURSES FOR OCCASIONAL STUDENTS.

11. **A ONE-YEAR COURSE.**—This course includes lectures and laboratory work on foods and their preparation, invalid cookery, marketing and the serving of meals, household management (including sewing), home nursing and home economics. As the number of students who can be admitted is limited, preference is given to those who are best qualified. Fee \$60.00.

12. **A THREE-MONTHS' COURSE.**—This course includes lectures and laboratory work on foods, household management and home nursing. As the number of students who can be admitted is limited, preference is given to those who are best qualified. Fee \$25.00.

13. **FOODS.—First Course.** This course includes lectures and laboratory work. In the laboratory scientific principles are studied and applied in the individual preparation of beverages, vegetables, cream soups, cereals, fruits, meat, poultry, fish, eggs, milk, cheese, batters and doughs (muffins, biscuit, bread, etc.) Two half days a week for one term. The number who can be admitted is limited. Fee \$10.00.

14. **FOODS.—Second Course.** This course elaborates and applies the fundamental principles gained in the first course. Special attention is given to the cost of food as compared with its nutritive value. The laboratory work includes canning and preserving, the making of jellies, cakes, icings, pastry, etc., also the preparation of salads, entrées, shell fish, poultry, gelatine dishes, and frozen desserts. Two half days a week for one term. Prerequisite: Course 13. Fee, \$15.00.

15. **INVALID COOKERY.**—These lessons are especially arranged for those who have the care of the sick and convalescent. They include a theoretical and practical knowledge of foods, their preparation and adaptability to patients. The practical work consists of the preparation of beverages, soups (nut, fruit, and cream), cereals, gruels, egg dishes, custard and other milk preparations, meat and fish in easily digested forms, broths, gelatine dishes, light desserts, and frozen mixtures. Three hours a week for one term. Fee, \$8.00.



16. **ECONOMICS OF THE HOUSEHOLD.**—This course includes discussions of the house (simple construction, division of floor space, principles of decoration); the economics of spending; the division of the income; the home in its relation to society. Fee, \$5.00.

17. **HOME NURSING AND EMERGENCIES.**—This course gives instruction in the home care of the sick, where a trained nurse is not required. The care and disinfection of sick-rooms, making of bed, bathing patient, administering food and medicine, making of poultices, immediate treatment of everyday injuries and minor accidents, and how to put on simple bandages, are some of the topics studied. Two and a half hours a week for one term. Fee, \$6.00.

18. **HOUSEHOLD MANAGEMENT.**—This course provides instruction in the care of the various rooms of the house and in the serving of meals. Theoretical and practical instruction in laundry work is also given. Scientific principles are applied in the use of chemicals as cleansing agents and in the removal of stains. Five hours a week for one term. Fee, \$6.00.

**POST-GRADUATE WORK.**—Opportunities are offered in the laboratories to graduate students who desire to engage in research work.

**LABORATORY DEPOSIT FEE.**—A deposit of three dollars (\$3.00) is required of each student taking laboratory courses. This amount, minus the cost of equipment and apparatus destroyed, will be returned at the end of the year.

In the Food laboratories students are required to wear plain white aprons, in Household Management laboratories dark ones may be worn.

**BOOKS OF REFERENCE.**—Food and Dietetics, Hutchison; Practical Dietetics, Thompson; Practical Dietetics, Pattee; Food and Feeding, Watson; Human Foods, Snyder; Selection and Preparation of Food, Bevier and Van Meter; Chemistry of Food and Nutrition, Sherman; Pure Foods, Olsen; Household Economics, Campbell; Cost of Living, Cost of Shelter, Richards; Chemistry of Cooking and Cleaning, Richards and Elliott; Household Administration, Ravenhill; The Care of a House, Clark; The New Housekeeping, Frederick; The Science of Laundry Work, The Art and Practice of Laundry Work, Rankin; Care and Feeding of Children, Holt; Nursing, Its Principles and Practice, Hampton-Robb; Practical Nursing, Maxwell and Pope; Domestic Art in Woman's Education, Cooley; Equipment for Teaching Domestic Science, Kinne; Government Bulletins; Library of Home Economics, Vol. I-XII.

## PHYSIOLOGICAL AND FOOD CHEMISTRY.

*Associate Professor of Physiological Chemistry:*

MISS C. C. BENSON.

*Instructor in Physiological Chemistry:*

MISS O. G. PATTERSON.

1. Lectures and Laboratory Courses on Chemistry of Foods and Studies of Metabolism.
2. Post-Graduate Work in Metabolism and Food Chemistry.

## FEES.

Courses, for which the fees have not been specified in the preceding pages, will be charged for according to the following table:—

## TUITION FEES.

	For the Session.	For the Term.
For a course in any one subject.....	\$10.00	\$5.00
For a course in more than one subject, each subject.....	9.00	5.00
Maximum Fee.....	45.00	23.00
Additional charges will be made for laboratory supplies.		

## EXAMINATION FEES.

For examination in one subject of any year, each.....	\$5.00
Maximum examination fee.....	10.00

All University fees are payable to the Bursar, at his office in the Main University Building, between the hours of ten and one o'clock, except on Saturday. Fees payable in the Michaelmas term must be paid on or before October 20th, those payable in the Easter term on or before January 20th, and Examination fees before March 15th.

## PROFESSIONAL CERTIFICATES IN HOUSEHOLD SCIENCE.

The Ontario Department of Education offers the following certificates in Household Science:

1. **ELEMENTARY CERTIFICATES.**—Elementary certificates in Household Science will be granted by the Department of Education to the following classes of students and on the following conditions:

(1) To Grade A Normal School students who have passed the final examination of the Normal Schools and have taken, from April to the end of June, the prescribed course in Household Science at the University of Toronto, and have passed the prescribed final examinations.

(2) To other Normal School students who have taken the High School Course in Household Science and have passed the special examination in these subjects at the close of the High School Course, who have passed the Normal School June final examination, who have taken the prescribed Summer School course in July in Household Science at the University of Toronto, and who have passed the prescribed final examinations.

(3) To teachers with First, Second or Third Class certificates who have taken the two prescribed Summer School courses in July in Household Science at the University of Toronto, with directed winter's reading courses, and have passed the prescribed final examinations.

2. **INTERIM ORDINARY CERTIFICATES IN HOUSEHOLD SCIENCE.**—Professional First or Second Class Certificates are required for entrance.

3. **INTERIM SPECIALISTS' CERTIFICATES IN HOUSEHOLD SCIENCE.**—Graduates in Arts in the Department of Household Science of the University of Toronto shall be entitled to an Interim Specialists' certificate in Household Science on completing the professional course at the Faculty of Education.

**PERMANENT CERTIFICATES IN HOUSEHOLD SCIENCE.**—An Interim Ordinary or Specialist's certificate will be made permanent on the report of the Inspector that the holder has completed satisfactorily two years' service as teacher of Household Science in one or more of the schools of the Provincial system.

**VALUE OF CERTIFICATES IN HOUSEHOLD SCIENCE.**—With the approval of the Minister, the Elementary certificates in Household Science shall be valid in rural or village public or separate schools where most of the teacher's time is given to the general work of the school programme.

Any person holding an Ordinary or Specialist's certificate in Household Science shall be legally qualified to teach that subject in any of the schools of the Province, but Specialists shall have the preference in appointments to the staffs of the Collegiate Institutes, and, as soon as the supply is adequate, Specialists alone shall be qualified to hold positions in Collegiate Institutes.



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**FACULTY OF EDUCATION.**

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## **THE FACULTY OF EDUCATION.**

### **GENERAL INFORMATION.**

The Faculty of Education was created by resolution of the Board of Governors of the University in December, 1906. Its first curriculum was adopted in June, 1907, and it began its first session in October, 1907.

The Faculty of Education is the University's professional school of education. It trains candidates for diplomas as special or regular teachers and in particular for Provincial certificates as Inspectors, First-class Public School Teachers, High School Assistants and Specialists in Classics, English and History, Moderns and History, French and German, Mathematics, Science, and Commercial Work. It also offers courses for degrees in Pedagogy.

The buildings of the Faculty of Education on Bloor Street contain well-equipped and well-ventilated lecture-rooms, laboratories, and reading-rooms for the accommodation of the teachers-in-training, and model class-rooms for observation and practice-teaching. So far as necessary the observation and practice-teaching to be had in these model class-rooms will be supplemented by observation and practice-teaching in city schools in the neighborhood.

While the chief exercises of the Faculty of Education will be conducted in the buildings on Bloor Street, the teacher-in-training may use the University's library, gymnasium, athletic fields, etc., under such conditions as obtain with other students. In short, the students enjoy all the privileges of University students and are subject to the same regulations.

Application for admission to the Faculty should be made to the Secretary of the Faculty of Education, University of Toronto, before October 1, and application for examination before April 2. All fees should be paid to the Bursar of the University.

The Eighth Session of the Faculty of Education will open September 30th, 1914, and close May 31st, 1915.

### **BOARD AND LODGING**

Lodging and board are readily obtainable in private boarding houses within convenient distance of the University at a cost of from four dollars per week upwards for lodging with board; or, rooms may be rented at a cost of from one dollar per week upwards, and board obtained separately at reasonable rates. A list of accredited boarding houses is kept by the

Secretary of the Faculty of Education, the Secretary of the Young Men's Christian Association of the University, the Lady Superintendent of University College, the Secretary of the Young Women's Christian Association, and the Dean of Annesley Hall, and students are recommended to consult them with reference to the selection of suitable accommodation. In addition to the University Residences and Dining Hall the following Residences offer suitable accommodation at reasonable rates: for men, Trinity College, St. Michael's College, Wycliffe College, Knox College; for women, Queen's Hall, Annesley Hall, South Hall, St. Hilda's College.

### TERMS OF ADMISSION.

A candidate for admission to the Faculty of Education should make application on a form to be obtained from the Secretary of the Faculty and should submit with this application:

(1) A certificate from a competent authority that he will be at least 19 years of age before the first of October.

(2) A certificate from a clergyman or other competent authority that he is of good moral character.

(3) A certificate in detail from a physician that he is physically fit for the work of a teacher and especially that he is free from serious pulmonary affection and from serious defects in eyesight and hearing.

(4) One of the following:

(a) His certificate of graduation in Arts after a regular course from the Registrar of any University in the British Dominions, said certificate to be subject to the approval of the Minister of Education.

(b) His certificate of graduation in the Science of Agriculture, B.Sc. (Agr.), after a regular University course approved by the Minister of Education.

(c) His Senior Teacher's Certificate.

(d) His full certificate for Entrance into the Faculty of Education.

(NOTE:—No one will be granted a teacher's certificate by the Department of Education who does not agree to teach thereon in the schools of the Ontario provincial system for at least the first year of his subsequent teaching experience. A violation of this agreement will lead to a cancelling of the teacher's certificate.)

### COURSES.

(a) The General Course as the professional course for an Interim First Class and an Interim High School Assistant's Certificate.

(b) The Advanced Course as the professional course for an Interim High School Assistant's Certificate.

(c) The Special Courses for Specialists as the professional courses for Interim Specialists' Certificates.

(d) The Special Course for Public School Inspectors, as the professional course for a Public School Inspector's Certificate.

(e) Courses for Degrees in Pedagogy.

**GENERAL COURSE.**

*The General Course* may be taken by any student who has been duly admitted. It trains for certificates as teachers in Public and Separate, Continuation, and High Schools, and consists of three Parts:—

**Part I.**

1. The History of Education, the Science of Education, including Psychology, Child Study, and General Method, School Organization and Management, and Special Methods in the subjects of the Public and Separate School Course not included in Part II below, and in the following subjects of the High School Courses:—

English, History and Geography, Mathematics, Latin, and one of the following groups:—

- (a) Biology, Physics, Chemistry and Mineralogy;
  - (b) French and German;
  - (c) Greek and French;
  - (d) Greek and German.
2. A review, from the academic standpoint, of the subjects of the Public School Course and of the High School Courses through the Middle School. This review will be limited to such portions of each subject as may be necessary to determine the scholarship of the candidates and to illustrate the methods of instruction in that subject.

**Part II.**

A course of instruction, both academic and professional, in the Nature Study, Vocal Music, Manual Training (for men), and Manual Training (Forms I, II, III) with Household Science (for women) of the Public School Course, and the Reading, Art, Bookkeeping and Writing, Elementary Science, and Physical Culture and Hygiene of both the High and the Public School Courses.

**Part III.**

1. Observation and Practice Teaching in Public and High School grades with Observation in ungraded rural schools.
2. The Observation will involve the equivalent of forty school lesson-periods and the Practice Teaching, for those who have taught at least one year in Public or Separate Schools, the equivalent of twenty school lesson-periods and for all other students, the equivalent of twenty-five school lesson-periods.
3. Both the Observation and the Practice Teaching may be increased according to the experience, aptitude, and progress of the student.
4. In Observation and Practice Teaching the emphasis will be laid upon the work of the Public Schools and the Lower School of the High Schools.

**THE ADVANCED COURSE.**

The Advanced Course may be taken by students who are graduates in Arts or who hold the degree of B.Sc. (Agr.), as herein prescribed, before the beginning of the Session. It trains for certificates as teachers in Continuation and High Schools, and consists of three Parts:—

**Part I.**

1. The History of Education, the Science of Education, including Psychology, Child Study, and General Method, School Organization and Management, and Special Methods in the following subjects of the High School Courses:—

English, History and Geography, Mathematics, Latin, and one of the following groups:—

- (a) Biology, Physics, Chemistry, and Mineralogy;
- (b) French and German;
- (c) Greek and French;
- (d) Greek and German.

2. A review, from the academic standpoint, of the subjects of the High School courses through the Middle School. This review will be limited to such portions of each subject as may be necessary to determine the scholarship of the candidates and to illustrate the methods of instruction in that subject.

**Part II.**

1. A course of instruction, both academic and professional, in the Reading, Art, Bookkeeping and Writing, Elementary Science, and Physical Culture and Hygiene of the High School Courses.
2. One at least of the Seminar Courses as hereinafter defined, selected with the approval of the Faculty of Education, from each of the following Groups:—

Group A—History and Criticism of Educational Systems,  
Science of Education.

Group B—Classics, English and History, French and German,  
Mathematics and Science.

**Part III.**

Observation and Practice Teaching in the High School grades. The Observation will involve the equivalent of forty lesson-periods, and the Practice Teaching, for those who have taught at least one year in Public or Separate Schools, the equivalent of twenty school lesson-periods and for all other students the equivalent of twenty-five school lesson-periods. Both the Observation and the Practice Teaching may be increased according to the experience, aptitude, and progress of the student.



### SPECIAL COURSES.

*Special Courses* include:—

(a) Courses for Specialists. In both the General and the Advanced Course, special Courses will be provided for candidates for certificates as specialists.

(b) A special course for Inspectors of Public Schools. For a Public School Inspectors' certificate there will be an examination in May open to those who have fulfilled the conditions prescribed by the Department of Education for Public School Inspectors' certificates. The subjects of the examination will be as follows:—

Modern Systems and Tendencies in Education; History of Public Education in Ontario; School Administration and Law in Ontario; School Inspection, including the Supervision of Instruction in all subjects of the Public School Course.

(c) Such other special courses as may be offered from time to time.

### REGULATIONS.

1. (a) With the exceptions indicated below the standing of the students in attendance in the subjects of the *General* or the *Advanced Course* or in a *Special Course* shall be determined by the combined results of the term work and the final examinations. The term work shall consist of such exercises and tests as the Faculty may prescribe. The maximum marks for this term work shall not be more than 40 per cent. of the aggregate of marks for each subject.

(b) In Nature Study, Vocal Music, Manual Training, Household Science, Reading (of the High School Course), Art, Bookkeeping and Writing, Physical Culture, and the Seminars, the standing of the students in attendance shall be determined wholly by the term work.

(c) The standing of candidates not in attendance shall be determined by the results of the final examinations, or in the case of subjects enumerated in (b) above, by such practical exercises and tests as the Faculty may prescribe.

2. Examinations are held at Toronto or at such local centres as may be selected by the Senate. Written examinations or other tests are held in the following subjects at the close of the Session: Science of Education, School Organization and Management, Vocal Music, Art, Physical Culture, the Seminars, Methods in the English and Mathematics of the High School course, and in the Public School subjects referred to in Part I of the *General Course*. The examinations for specialists are also held at the close of the Session. The other written examinations or the tests in the other subjects may be held at convenient periods during the Session.

Candidates not in attendance may take their examinations or other tests in May or at such times and under such conditions as obtain with the candidates in attendance.

The percentage requirements for a pass in the General and Advanced Courses are forty per cent. of the marks for each subject, and sixty per cent. of the aggregate of marks for each of Parts I, II., and III. The requirements in the Inspectors' Course are forty per cent. of the marks for each paper and sixty per cent. of the aggregate of marks; in the Specialist Courses sixty per cent. of the marks in each paper or subject. The requirement for honours in the General or Advanced Course or in the Inspectors' Course is seventy-five per cent. of the aggregate of marks. Honours will be awarded only when all the examinations of a Course are completed at one time.

3. A candidate unsuccessful in Part III, or a candidate who, although successful in Part III, has not obtained at least 35 per cent. of the marks for each subject in Parts I and II, and at least 55 per cent. of the aggregate of the marks for each of said Parts will be required to attend a second session and pass in Parts I, II, and III. Unsuccessful candidates who are not required to attend a second session may complete their courses by passing in such Part or Parts (taken together or separately) as they have not already taken.
4. (a) Regular attendance in the General and the Advanced Courses is indispensable, except for such students as are exempt from attendance under the Regulations of the Department of Education, and for such other students as may be permitted by the Dean to act, for not more than a total of one month, as substitute teachers in the schools controlled by the Department of Education.

A return of the attendance shall be made to the Minister of Education at the close of the session.

(b) Students who in the opinion of the staff are unduly deficient in scholarship, or whose conduct or progress or general health is unsatisfactory, may be dismissed from attendance at any time during the session.

5. Candidates for Specialists' certificates under the Regulations of the Department of Education shall have their academic standing approved by the Department of Education before entering upon their special courses. No students in attendance except those who have had their standing approved may be admitted to the final examinations.
6. (a) Subject to the approval of the Minister of Education, the Faculty of Education may make such modifications of the scheme of optional groups in Part I, of either of the regular courses as will suit the condition of candidates for Provincial certificates who obtained their academic standing in courses which did not include all the subjects of any one of said optional groups.

(b) Candidates who hold provincial professional certificates in Art, Household Science, Manual Training, Vocal Music, Commerical Subjects, and Physical Culture may be exempted from the courses and examinations in these subjects. Candidates who hold provincial certificates in Physical Culture shall take the courses but may be exempted from the examinations.

(c) Candidates who have passed in Household Science as a bonus at the examination for Entrance to the Normal Schools may be exempted from the academic work in sewing and cooking, but shall take the methodology of the subject. Those who have passed in Manual Training as a bonus at the same examination may be exempted from the course in wood-working of Form IV, but shall take the Manual Training of Forms I, II, III of the Public and Separate Schools, together with the methodology of the subject.

7. (a) The annual fee for the General or the Advanced Course (with or without the course for Specialists), which shall include the library, gymnasium and examination fees, shall be \$25.00. The fee for the examination in the General or the Advanced Course when the examination is not taken during the regular session or when it is taken by students not in attendance, shall be \$15.00 or \$10.00 for each Part when taken in Parts. The fee for the Specialists' examination when taken apart from the regular course shall be \$5.00 for each examination paper. The fee for the Inspector's examination shall be \$15.00. The fee for the University Diploma will be \$2.00. A deposit of \$1 will be required of teachers-in-training who make use of the branch library in the Education building. Every male student in attendance is required to pay on registration a fee of \$1 in behalf of the maintenance of the Council of the Undergraduates.

(b) All students exempt from attendance, who are duly registered in the Faculty and who pay a fee of \$10.00 (which shall not in this case include the fee for examination) may receive from the staff of the Faculty such guidance in their courses as may reasonably be expected by students not in attendance.

## REGULATIONS OF THE DEPARTMENT OF EDUCATION.

I. Certificates of qualification may be awarded by the Department of Education on the results of the examinations of the Faculty of Education as follows:—

### 1. INTERIM HIGH SCHOOL ASSISTANTS' CERTIFICATES.

(a) To students who are twenty-one years of age, who have attended regularly, and who have obtained in each of Parts I, II, and III of their Courses 40 per cent. of the marks in each subject and 60 per cent. of the aggregate of marks.

(b) To students who are twenty-one years of age, who are exempt from attendance and from the examination in Part III, and who have obtained in each of Parts I and II of their Courses 40 per cent. of the marks in each subject and 60 per cent. of the aggregate of marks.

## 2. INTERIM FIRST CLASS CERTIFICATES.

(a) To students who have attended regularly, and who have obtained in each of Parts I, II, and III of their Course 40 per cent. of the marks in each subject and 60 per cent. of the aggregate of the marks.

(b) To students who are exempt from attendance and from the examination in Part III, and who have obtained in each of Parts I and II of their course 40 per cent. of the marks for each subject and 60 per cent. of the aggregate of marks.

## 3. INTERIM SECOND CLASS PUBLIC SCHOOL CERTIFICATES, valid for two years, to students in the General Course who have attended regularly, and who have obtained at least 35 per cent. of the marks for each subject in Parts I, and II, and at least 55 per cent. of the aggregate of the marks for each of said Parts, and have passed in Part III.

## 4. INTERIM HIGH SCHOOL SPECIALISTS' CERTIFICATES:

(a) To candidates in attendance who have fulfilled the conditions of one of the regular Courses and who have obtained 60 per cent. of the marks assigned to the Special Course or Courses of their department.

(b) To candidates who are exempt from attendance, and who have obtained 60 per cent. of the marks assigned to the paper or papers in the Special Course of their departments.

## 5. PUBLIC SCHOOL INSPECTORS' CERTIFICATES:—To candidates who have obtained 40 per cent. of the marks in each paper and 60 per cent. of the aggregate of marks.

## II. SPECIAL CASES of Candidates Exempt from Attendance.

(a) Teachers who have been granted only Interim High School Assistants' Certificates may, without further attendance, obtain Interim First Class Certificates, by passing at one subsequent examination and with the prescribed percentages in the special Public and Separate School subjects of the General Course and by satisfying the Faculty, by a practical test, of their ability to teach Public and Separate School classes.

(b) Teachers who hold First Class or High School Assistants' Certificates, interim or permanent, may, without further attendance, obtain Interim Specialists' Certificates, provided they hold the necessary academic certificate and pass the professional examinations for such standing in the Special Courses prescribed for such certificates.

(c) Teachers who hold permanent Second Class certificates, with the academic standing prescribed for admission into the Faculties of Education, and who present certificates of at least five years' suc-



cessful experience (all in Canada and at least one-half in Ontario) from the Public or Separate School Inspectors under whom they have taught during that period, may write at the examination in the General Course, taking Parts I and II together or separately, but without taking the prescribed session, or being required to pass in Part III. Such candidates will be granted Permanent First Class certificates, and Interim High School Assistants' certificates also, on satisfying the Faculty, by a practical test, of their ability to teach High School classes.

(d) Unsuccessful candidates who have attended a Session in any Course, and who, of the aggregate of the marks for the term's work and final examinations, have obtained at least 60 per cent. in Part III, 35 per cent. in each subject of Parts I and II and at least 55 per cent. of the aggregate of the marks for each of said Parts, may write at the examinations for Interim First Class or High School Assistants' Certificates without taking the session over again or being required to take again the Part or Parts in which they have already passed.

### III. VALUES OF CERTIFICATES.

(a) An Interim Second Class Public School Certificate shall entitle the holder to teach in a Public School.

(i) An Interim First Class Public School certificate shall entitle the holder to teach as Principal or Assistant in a Public School, as Assistant in a Continuation School, or as Principal of a Grade B or Grade C Continuation School if endorsed by the Minister as valid for such Principalship after two years' successful experience as attested by the inspectors.

(ii) An Interim High School Assistant's Certificate shall entitle the holder to teach as assistant in a High School or a Grade A, or if the Principal holds an Interim or Permanent First Class Public School certificate, Grade B Continuation School.

(iii) Interim Certificates may be extended from year to year by the Minister of Education on the report of the Public, Separate, Continuation, or High School Inspector under whom the holder of the certificate has last taught, or on the application of the holder if he has not taught thereon.

(b) After at least two years of successful experience on a professional certificate as a teacher in a Public or Separate School, the holder of an Interim First or Second Class Certificate shall, on the report of the last Inspector concerned, be entitled to a permanent certificate, provided, however, that he is then 21 years of age.

(c) After at least two years of successful experience as a teacher in a Continuation or High School, subsequent to the date on the face of the certificate, the holder of an Interim High School Assistant's certificate,



ordinary or specialist, shall, on the report of the last visiting Inspector concerned, be entitled to a permanent certificate of the same grade. In the case of a specialist he shall also satisfy the Inspector of his competency to teach the Upper School subjects of his department.

(d) A Bachelor or Master of Arts, or a Bachelor in the Science of Agriculture, who holds a High School Assistant's certificate, and who, as shown by the report of the last visiting High School inspector concerned, has taught successfully at least three years (two of which were spent in a High School or in a Continuation School with at least two teachers) shall be entitled to a certificate as Principal of a High School or Collegiate Institute or of a Continuation School with at least two teachers.

### DETAILS OF COURSES.

The bibliographies given below are merely *suggestive*. No text-books are *required*. All bibliographies under Methods are intended to include the text-books authorized for use in the Public and High Schools of Ontario.

## PART I.

### HISTORY OF EDUCATION.

Throughout these courses attention will be given to the social conditions and ideals from which the educational theories and practices arose. As a part of national development education will be studied in its relationships and not as an isolated phenomenon. A. will be studied in outline, B. in greater detail.

A. Evolution of education in primitive society. Oriental education. Educational ideals of eastern and western nations compared. Greek life and civilization. Old Greek education with Spartan education as its type. New Greek education with Athenian education as its type. The sophists and the great educational theorists, Socrates, Plato and Aristotle. The idea of a liberal education. Roman life and civilization. Roman educational ideals and practices contrasted with those of Greece. Great educational theorists, Cicero and Quintilian. The idea of a practical education. Life in the Middle Ages. Christianity and education. The education of the monastery and the castle. Education in Charlemagne's empire and in England and Ireland. Scholasticism and the rise of the universities. The Renaissance and the rise of humanism. Educational significance of the Renaissance. The work of Petrarch, Vittorino da Feltre, Erasmus, Elyot, Ascham, and Sturm. The Reformation and Counter-Reformation. Luther and elementary education. The Jesuits and the Teaching Orders. Realism and science in education. Types of realism represented by Rabelais and Montaigne, by Mulcaster, Milton, and Locke, and by Bacon and Comenius.

B. Education according to nature. Development of the new ideal in Rousseau and Basedow. The psychological ideal in education as represented in the work of Pestalozzi, Herbart and Froebel. The scientific and sociological ideals as represented by Spencer and modern theorists. The development of public education in Germany, Great Britain, France, the United States, and Ontario. Present day tendencies in educational administration and organization.

*References:*—Monroe. A Brief Course in the History of Education.  
 Parker. History of Modern Elementary Education.  
 Munro. The Educational Ideal.  
 Adamson. Pioneers of Education.  
 Laurie. Educational Opinion since the Renaissance.

## SCIENCE OF EDUCATION.

Science of Education including Psychology, Child Study and General Method.

(1) A course of lectures dealing in the main with the following topics:—

Relation of the mental to the physical. Inborn tendencies. Sensation. Perception. Attention. Memory. Imagination. Conception. Apperception. Judgment and reasoning. Feeling and emotions. Interest. Habit. Will. Character. Motor activity. Curiosity. Suggestion and imitation. Heredity and environment. Adolescence and child study.

The meaning and aim of Education; statement and examination of typical theories; individual and social elements in Education; the school as an agency of social progress; its relation to other social institutions, the home, the church, the state, the vocation, etc.; the school as a means of individual growth and development; the problem of individual differences in children; the curriculum as an expression of social values; its origin; phases of its growth; present day movements for reform of the curriculum.

The significance of infancy; the native physical endowment of the child; heredity and environment as factors in human development; instinct in Education; its relation to habit and intelligence; physical growth and development; motor activities in Education; their relation to mental and moral development; play as a factor in Education; the mental and moral bearings of schoolroom hygiene.

The doctrine of self-activity; imitation and curiosity as factors in mental growth; the nature of the learning process; meaning of such terms as experience, knowledge, judgment, etc.; place of analysis and synthesis, deduction and induction in the growth of experience.

The instinctive element in morality; the social element in morality; the moral aspect of various school-room activities; the curriculum as an agency in moral instruction and moral training; the teacher as a factor in the moral life of the child.

Liberal and applied education as supplementary to each other; place of industrial education in the educational system; relation of constructive work and manual activities to mental attitudes of children and to community life. Law, government, and social requirements as elements in education.

General method. Meaning of instruction. Instruction and education. Psychologic foundations of method. General principles. Function and conduct of the recitation, including a discussion of such topics as typical lesson forms and teaching devices, planning for a lesson, class preparation for a lesson, development of a lesson, lesson plans.

(2) The study in class of certain educational classics selected from the following list: Milton, Tractate on Education; Locke, Some Thoughts concerning Education, and Conduct of the Understanding; Froebel, The Education of Man; Rein, Outlines of Pedagogics; Spencer, Education; Dewey, The School and Society.

*References:*—Dewey. School and Society. The School and the Child.  
 Drummond. The Child.  
 James. Talks to Teachers on Psychology.  
 Kirkpatrick. Fundamentals of Child Study.  
 McDougall. Psychology.  
 Raymont. *Principles of Education*.  
 Ruediger. The Principles of Education.  
 Sandiford. *Mental and Physical Life of School Children*.  
 Scott. Social Education.  
 Strayer. A Brief Course in the Teaching Process.  
 Thorndike. Elements of Psychology.  
 Thorndike. Principles of Teaching.  
 Pillsbury. Essentials of Psychology.

## SCHOOL ORGANIZATION AND SCHOOL MANAGEMENT.

The discussion of the various topics mentioned below will include a statement of the School Law and Regulations of Ontario pertinent thereto:

1. Nature and problems; forms of educational control; executive and legislative functions of Department of Education; school boards and their functions; inspectors and other school officials; relation of inspectors and principals to teachers; relation of teachers to parents, pupils, caretakers, trustees; finance of education; local and provincial burdens; business administration.

2. Types of schools; functions of each type, primary, secondary, and higher schools; consolidated schools; day and evening schools; training schools; commercial, industrial, agricultural or technical schools; schools for sub-normal children, defectives and delinquents.

3. School sites and surroundings; school buildings, construction, care-taking, heating, ventilation, lighting, sanitation, decoration, equipment; libraries and apparatus; text books, their authorization, use and abuse; free text books.

4. The teacher; qualifications and certificates; appointment, tenure, promotion, improvement of status; superannuation of teachers.

5. The pupil; privileges and duties; classification; grading; promotion; retardation and elimination; school discipline.

6. Oral and written exercises; examinations; records; prizes and other incentives.

7. Time-tables and daily programmes for various types of schools; attendance records.

8. School hygiene; medical inspection.

*References:*—Bagley. Class-room Management.

Landon. Principles and Practice of Teaching and School Management.

The School Law and Regulations of Ontario.

Shaw. School Hygiene.

## SPECIAL METHODS IN PUBLIC SCHOOL SUBJECTS.

For the details of courses in certain Public School subjects not mentioned under this heading, reference should be made to the subjects in Part II. For the details of courses in the subjects of Fifth Classes and Continuation Schools, reference should be made to the High School subjects defined below.

*Language and Composition.*—The importance of language training.

Oral and written composition; their relation; how habits of speaking and writing good English are formed.

Methods in oral and written composition; oral exercises as a means of obtaining free natural expression; principles governing criticism; relation of grammar to composition; the principles to be kept in view in conducting exercises in written composition; value of topical outlines; method of correcting compositions.

Mechanics of written composition; sentence and paragraph structure; paragraph compositions; punctuation marks; etc.

Materials for oral and written composition; principles governing the choice of topics in the different grades; outline of suitable material for different grades.

*References:*—Chubb. Teaching of English.

Bates. Talks on the Writing of English.

Public School Manuals.



*Spelling.*—Scope of Spelling.

Methods in Spelling: An examination of the various methods of teaching spelling; the adaptation of each to the nature of the words and to the individual mental characteristics of the pupils; lesson procedure in the junior grades; lesson procedure in the senior grades.

Materials for spelling: principles of selection of material for spelling.

*Literature.*—The aims in teaching literature.

The nature and elements of literature.

Selection of subject-matter for literature lessons; qualities of literature that appeal to children of different ages; basis of selection of material for different grades; lists of suitable selections. Supplementary reading; use of library.

Methods in teaching literature.

Lesson procedure: teacher's preparation; pupils' preparation; total meanings grasped first; analysis of these; final reading.

*References:*—Chubb. Teaching of English.

McMurry. Special Method in Reading of English Classics.  
Public School Manuals.

*Grammar.*—The topics to be discussed here are to be found in the prescription of work in Grammar as a High School subject.

*Arithmetic.*—The aims in teaching arithmetic.

The scope of arithmetic; its relation to other subjects; its practical aspects.

The origin of number; the various steps involved in the development of the number idea.

Methods in arithmetic: analysis and synthesis; induction and deduction; graphic methods; use of concrete material, text-books and apparatus; importance of training in, and devices to secure, neatness, accuracy and speed in computation; mental arithmetic; problems and their solutions.

The various arithmetical operations; counting; notation and numeration; addition; subtraction; multiplication; division; factoring; cancellation; measures and multiples; fractions; applied arithmetic. Other topics are to be found under Arithmetic as a High School subject.

*References:*—McMurry. Special Method in Arithmetic.  
Public School Manuals.

*History.*—The topics to be discussed here are to be found in the prescription of work in History as a High School subject.

*Geography.*—Elementary Work: Methods of teaching elementary geography with detailed treatment of typical subjects: home geography; observational methods; uses of pictures, maps, globes, etc.



Commercial Geography: Factors determining commerce with illustrations from Canada and other countries. Treatment of the more important commercial commodities. Regional geography and topical geography. Relation of physical features to commerce.

*References:*—Geikie. The Teaching of Geography.  
Redway. New Basis of Geography.  
Frye. Home Geography.  
Andrews. Seven Little Sisters.  
Mill. International Geography.

## METHODS IN HIGH SCHOOL SUBJECTS.

### ENGLISH.

(a) *Grammar.*—The purpose of teaching grammar. Recognition of correct forms of speech; the principles underlying their use. Difficulties of overcoming the use of incorrect forms acquired outside of school. Value of analysis of sentences and of the study of the functions and relations of words. Consideration of the courses in grammar in Elementary and Secondary Schools. What work should be covered in the first year in the Lower School? Necessity of securing variety. Work covered in the second year. Use of a text-book in grammar. The advantages and limitations of the inductive method in teaching grammar in the Secondary School.

(b) *Composition.*—Composition presupposes thought and feeling to be expressed and someone for whom expressed. Value of composition to the individual in defining his own thought. Greater social value. This social factor demands clearness and effectiveness of style. Varieties of composition: (1) written composition, including the formal essay, class exercises, and correspondence, (2) oral composition, including speeches and debates.

(1) *Written Composition.*—The formal essay. Subjects suited to the age and experience of the pupil. Different interests of pupils. Writing of the essay. How often written. In school or at home. Use of composition books. Collection of essays. Planning the essay. Preliminary discussion. Value of formal plans. Marking of essays. System of signs used in marking errors. Teachers' general criticisms. Re-writing of essays. Discussion of errors in class. Different types of errors. Value of individual work. Self-criticism by pupil.

The development of style. Importance of choosing the best line of treatment. Selection of subject-matter. Value of a knowledge of rhetorical principles, and practice in rhetorical analysis. Effect of the quality and range of the pupil's general reading upon his style.

Class exercises. Aim to give the pupil command over the elements of form and expression. Varieties of class work. Use of a text-book. Methods of dealing with exercises.

Correspondence.

(2) *Oral Composition*.—How oral composition differs from written composition with respect to subject-matter and expression. Aim of class-work in oral composition; improvement of the pupil with respect to manner, form of speech, vocal control. How to conduct an oral composition lesson.

(c) *Spelling*.—Causes of incorrect spelling. Necessity for teaching underlying principles. Importance of a knowledge of derivation. Value of rules.

(d) *Literature*.—Literature in the Secondary School. Purpose of teaching literature. Literature defined as essentially (a) artistic; (b) an expression of the ideal; (c) a reflection of life.

The emotional element in poetry. The poet as an ethical teacher. Free range of the imagination of the poet. The importance of the artistic element in poetry. The language of poetry. Principles governing the selection of material. Selections suitable for literature in the Lower School. List of books for supplementary reading. Complete wholes versus extracts. Lists of recommended books for outside reading. Use of the school library. The selection of books for the school library. Relations with the Public Library.

Methods of teaching literature. The extensive and the intensive study of literature compared. The introduction to the lesson. Difference in the treatment of long and short passages, and of narrative, lyric and dramatic literature. The preliminary reading of the selection. The place of explanation of words and phrases. The importance of the teacher's ability to read well. Oral reading by the pupils, after study.

Memorization. The value of oral and written reproduction. Examinations in literature.

Methods of dealing with supplementary reading. Means of testing the pupils' outside reading.

(e) *Oral Reading*.—Methods of teaching reading. Attention to the principles of vocal expression; time; pitch; quality; force. The place and limitations of imitative reading. Class procedure. Relative values of prose and poetry as material for the lesson in reading.

*References*.—Carpenter, Baker and Scott. The Teaching of English.  
Chubb. The Teaching of English.  
Public and High School Manuals.

## HISTORY.

The scope and nature of the subject-matter; the choice of materials for school use; what facts are of most worth.

The aim in teaching history; its value for discipline, for citizenship, for the understanding of present conditions.

The method of teaching; the lecture method; the Socratic method; "cause and effect" in history; the use of sources; the conduct of the recitation; the individual work of the pupil; the acquiring of time and space relationships; the use of dates, charts, maps.

The study of civics.

The correlation of history with geography; with literature and composition; supplementary reading in history; the historical novel; school societies and the conduct of public business.

The text-book, its use and abuse; bibliographies and works of reference; pictures and lantern slides.

The study of current events and present conditions in our own and foreign lands; analogies with events and conditions of the past.

*References:*—Bourne. The Teaching of History and Civics.

The Committee of Seven. The Study of History in Schools.  
Public School Manual—History.

Macpherson. Visual Aids in the Teaching of History.

## GEOGRAPHY.

Elementary Work: Methods of teaching elementary geography with detailed treatment of typical subjects; home geography; observational methods; uses of pictures, maps, globes, etc.

Commercial Geography: Factors determining commerce with illustrations from Canada and other countries. Treatment of the more important commercial commodities. Regional geography and topical geography. Relation of physical features to commerce.

The use of Contour Maps to interpret and illustrate different land forms.

The High School Course will be dealt with academically and the best methods considered. Special stress will be put on the use of experimentation and observation.

*References:*—Chisholm. Handbook of Commercial Geography.

Geikie. The Teaching of Geography.

Holtz. The Teaching of Geography.

Mill. International Geography.

Salisbury. Physiography.

Salisbury. Barrow and Tower. Essentials of Geography.

Tarr and Von Engeln. Laboratory Manuals of Geography.

## MATHEMATICS

*Arithmetic:* Its value and scope; its relation to the other subjects on the curriculum; the origin of number: the various steps involved in the development of the number concept; number pictures; number symbols; the unit, its nature and use; the necessity for standard units; number a ratio; the Grube method, its merits and its defects; the fundamental processes and their relations; graphic methods; use of concrete material in making clear new processes and in verifying and interpreting operations performed; the importance of training in, and devices to secure neatness, accuracy and speed in computation; the importance, place and treatment of mental arithmetic; the value of problems; the essentials of proper solutions; interest in problems for which the pupils themselves furnish the materials; problems depending upon local statistics; where and how to assist pupils; the unitary method, its merits and limitations; the fraction, considered as a quotient and as equal parts of a unit; development of the rules of fractions; decimals, as special fractions and as complements of common notation; approximate results; percentage and its applications to commercial arithmetic; value of tables; mensuration, the application of arithmetic to space relations; theoretical and practical methods; the necessity for the use of models; square root.

*Algebra.*—Arithmetical Algebra: Transition from arithmetic to algebra; generalization of language and of method; the introduction and defining of symbols; the negative quantity; the simple rules; the distributive law, commutative law, index law, sign rule, the equation and its place in algebra; factoring; highest common factor and lowest common multiple; use of detached coefficients; classes of simple equations; symmetry and its applications in elementary algebra; surds and imaginary quantities; quadratic equations; method of dealing with problems and the object to be kept in view in their solution; correlation of algebra and geometry; graphical methods of illustrating formulæ and of interpreting the roots of simple and quadratic simultaneous equations.

*Geometry.*—Practical geometry to precede the theoretical: use of instruments; paper folding; necessity for accuracy; distinction between practical geometry and geometrical drawing; limitations of appeals to the concrete; value of experimental proofs; need of clear and definite conceptions of the fundamental truths; the place of the definitions and axioms; the proposition, what should be done in the class and what at home; the analytic-synthetic method of dealing with propositions and deductions; the indirect method of demonstration; methods of class teaching and class hearing; exercise of invention; the place and importance of exercises; the grouping and relating of propositions; practical applications; algebraic solutions; Euclid's method compared with modern methods.

*References:*—Smith. The Teaching of Elementary Mathematics.

Young. The Teaching of Mathematics.

Fink. A Brief History of Mathematics.



## CLASSICS.

*Latin*.—Pronunciation: exercises in oral reading from Caesar and Virgil. Vocabulary: its nature and extent. The importance of repetition, correlation with English, and arrangement of common words under types. The use of sight reading at every stage as an aid to the acquisition of a vocabulary. Various other devices.

Inflection: introductory lessons. The arrangements under types. Hints on the teaching of various lessons such as on the Third Declension of nouns, on adjectives and on verb forms.

Syntax: the teaching of syntax in connection with the translation of English sentences into Latin. The mode of treating it in connection with passages of authors read. Hints on the teaching of various lessons such as on the gerundive and gerund, conditional sentences, time clause, indirect discourse and the like.

Translation and kindred topics. The object of the course in translation. The difference between reading and translating; the stage at which reading and translating should begin; the choice and use of material for early reading in text-books and supplementary reading-books; a method for reading at sight; hints for the teaching of translation lessons in Caesar; oral reading of the text; oral and written translation; methods of dealing with difficulties of interpretation and faults in the form of rendering; the use of 'keys'; treatment of topics of grammar, history, archaeology and the like arising naturally from the context; use of charts and other forms of illustration; special consideration of the translating of Virgil; introductory lessons in Virgil; hints on the teaching of various passages; the metre of the Aeneid; memorization of typical selections.

*Greek*.—Aims and methods in teaching Greek, the importance of reading and translation; oral work in Greek teaching; pronunciation and accents; discussion of important lessons in White's First Greek book; the order of the lessons; method in teaching Homer; Homeric language-forms and metre; typical introductory lessons on Homer.

*The Classical Library*.—Discussion of the merits of the best books for the teacher's library in Latin and Greek.

*References*.—Bennett and Bristol. The Teaching of Latin and Greek.  
 Johnston, H. W. Pamphlets on the Teaching of Caesar and Virgil.  
 Hale. Pamphlets on the Art of Reading.  
 Articles in the "Classical Journal".

## MODERN LANGUAGES.

Methods as influenced by text-books, by size of classes and number of recitations per week. Direct Method. Pronunciation and oral work indispensable.



Phonetics; Practical course in Phonetics. Use of phonetic charts. Teaching by visualization.

Elementary Classes: How to conduct them without a text-book. Oral work combined with study of phonetics. Conversation and how to conduct it. Dictation, when to begin, how to conduct a lesson, correcting of errors. Length of lesson. Aids in teaching elementary classes. How to form a text-book of the pupil's notes. Grammar taught inductively from material supplied by the teacher. How to acquire a vocabulary.

Grammar: Inductive teaching. Value of grammatical rules. Repetition. Use of Mnemonics. Deductive Method. Special illustrative lessons on essentials of French and German Grammar. Importance of the Verb. How to conduct a profitable drill.

Translation: When to introduce it. Dangers to be avoided. Transliteration and Translation. Various methods of conducting recitations. How to use the Reader. Cultivation of the literary taste. Reading of the text aloud in French or German by the teacher and by the pupil.

Composition: Based on models. Oral drill on the Reader. Translation from English. Free reproduction. Original themes and exercises. Writing of letters. Methods of correction. How to use a vocabulary and dictionary.

*References:*—Heath & Co. Report of the Committee of Twelve.

Heath & Co. Methods of Teaching Modern Languages.

Jespersen. How to Teach a Foreign Language.

Savory & Jones. Sounds of the French Language.

Bahlsen. Teaching of Modern Languages.

Brebner. Method of Teaching Modern Languages in Germany.

Sweet. Practical Study of Languages.

Dumville. French Pronunciation.

Rippmann. Elements of Phonetics.

Breul. Teaching of Modern Languages.

## SCIENCE.

The course in Science will be illustrated by demonstrations and practical work.

Fuller treatment of topics under Elementary Science. Laboratory equipment. Methods of demonstration. Use of technical terms. Theories, facts, scientific laws. Text-books and reference books in Science.

Chemistry: Order of treatment: introductory work; chemical laws and theories; valency; formulae and equations; qualitative and quantitative experiments; chemical arithmetic.

Physics: methods in Heat, Light, Sound, Magnetism, Electricity, and Mechanics.

Biology: Methods of treatment. Dissection. Experiments with plants. The microscope, its care and use. School museums. Plant ecology. Relation of structure to function. Practical acquaintance with common plants and animals of Ontario.

Mineralogy: Purpose of High School Mineralogy. Its relation to Geography and Chemistry. Method of treatment of physical properties of minerals. Economic importance of minerals and rocks of Ontario. Familiarity with common rocks and minerals.

*References:*—Lloyd & Bigelow. Teaching of Biology.  
Smith & Hall. Teaching of Physics and Chemistry.  
Ganong. The Teaching Botanist.  
Colton. Zoology.  
Andrews. Practical Course in Botany.  
Wilson and Hedley. Elementary Chemistry.  
Gregory and Hadley. Classbook in Physics.

## PART II.

While the same general purposes direct the courses in the subjects of both Part I and Part II, special emphasis will be placed upon the academic review in the courses in the subjects of Part II.

### ART.

#### METHODS OF TEACHING ART.

How to use the various mediums, pencil, charcoal, crayons, chalk (on blackboard and on paper), brush with water colours.

Outline drawing of simple models and of objects based upon them, in freehand perspective.

Drawing in light and shade of simple models and of objects based upon them, in freehand perspective.

The study of colour: the standard colours, intermediate hues, neutralization of colour, scales of tones, colour harmonies and tone relations.

Composition and space filling.

Principles of design and their application to pictorial, decorative and industrial art.

Lettering.

The use of geometric forms and of forms conventionalized from nature. Simple landscapes.

Simple figure drawing from cast and pose.

Use of the memory in drawing.

Drawing for reproduction.

Principles of perspective.

Illustrative or imaginative drawings.

How to care for, mount, and exhibit school drawings.

Elementary modelling.

How to study pictures.

Outline of historic ornament and styles of architecture.

A short history of the schools of art with outstanding artists.

*References:*—Polak and Quilter. The Teaching of Drawing.

Whitney. Blackboard Drawing.

Crane. Line and Form.

Prang. Art Education for High Schools.

Crane. Bases of Design.

Cross. Colour Theory.

Cross. Light and Shade.

Hatton. Figure Drawing.

Simons. Modelling.

Caffin. How to Study Pictures.

Practical Drawing, Arts and Crafts Course.

*Commercial Work with Writing.*—(a) Business Papers; Receipts, promissory notes, drafts, orders, cheques, bank drafts, bills of goods, invoices, endorsement and acceptance and consequent liability.

Bookkeeping: Double and Single Entry. Changing from Single to Double Entry.

*References:*—The Public and High School Text-books and Manuals.

(b) Writing: correlation with other subjects.

A brief outline of the different methods of teaching the subject.

Penholding: Position at the desk; position of the paper; the proper formation of the small and the capital letters and the figures; various movement exercises; practice on paper and on the blackboard.

Use of headlines and copy-books; use of blank paper; its ruling; value of transcription, dictation, and composition in writing; how general and individual faults are corrected; the formation of a characteristic hand; how to deal with pupils having some physical disability.

The Course will include practical exercises in handwriting.

*References:*—The Public and High School Text-books and Manuals.

*Constructive Work and Manual Training.*—The nature and scope of Constructive Work. Its educational and practical values; its correlation with other subjects; exercises based on the activities and requirements of the school and the home; outlines of courses in the different forms of hand-work.

A practical course based on the following outline, with concurrent instruction in methods.

Typical forms of constructive work adapted to the capacities of children in the lower grades.

Cardboard work suitable for the higher grades of the Public School.

Mechanical drawing and freehand sketching; plans and blue-prints.

Woodwork: The workshop, tools, and materials, keeping tools in order; a short course in bench-work; designing.

*References:*—Gilman and Williams. Seat Work and Industrial Occupations.  
Kidner. Educational Handwork.  
Row. Educational Meaning of Manual Arts and Industries.  
Sargent. Fine and Industrial Arts in Elementary Schools.  
Crawshaw. Manual Arts for Vocational Ends.  
Manual in Manual Training.

*Elementary Science.*—Meaning of Science and scientific method. Educational value of Science. Experimental work, how conducted, how recorded. Manipulation. Glass working. Making of simple apparatus. Simple chemical operations, as filtration, solution, evaporation, precipitation. More advanced treatment of topics in Nature Study. Methods in special topics of Biology and Physics of Lower School. Elementary textbooks.

*References:*—Gregory & Simmons. Lessons in Science.  
Gregory & Hadley. Class-book in Physics.  
Bailey & Coleman. First Course in Biology.  
Manual of Suggestions for Teachers of Elementary Science.

*Household Science.*—A brief course of lectures with laboratory work.

This course includes a study of the following topics; the value of Household Science in the home, and the elementary school; its effect upon the community as it deals with common evils such as ignorance of food production and manufacture, with cooking processes, and with means of avoiding waste, etc.; house construction from the housekeeper's standpoint; disposal of sewage in a country home; the furnishing of the house, floor and wall treatment, kitchen equipment; the function of art in common life; the food principles; selection and preparation of foods; dietetics; home nursing; laundering.

*References:*—Wilson. Handbook of Domestic Science and Household Art.  
Hutchinson. Food and Dietetics.  
Snyder. Human Foods.  
American School of House Economics, Chicago. Library of Home Economics.

*Music.*—The Course is both practical and theoretical, its special object being the training of the teacher in the music suitable for Public School pupils.

The Course will include:

Tune: All intervals of the Major Diatonic Scale, both from Tonic Sol-Fa and Staff; the relative minor of each major key; transition to the dominant and sub-dominant (sharp and flat keys).

**Time:** Whole pulse, continued pulse, silent pulse, and pulse divided into halves, quarters and thirds, with the various combinations of these, in simple and compound duple, quadruple and triple times. All the above in both Tonic Sol-Fa and Staff Notations.

**Ear-training,** in Time and Tune: Recognition of the rhythm and tones of short musical phrases when played or sung, and their expression in either notation.

**Voice Training:** Breath-control, tone-production, blending of the registers and general training for quality, range and flexibility.

**Sight Singing:** Singing from pointing on modulator or staff; singing at sight easy passages containing the varieties of time and tune mentioned above.

**Songs:** School Songs in one or two parts, with special attention to accent, enunciation, phrasing, quality of tone and expression.

**Physiology:** anatomy of lungs, larynx, and resonating cavities; various methods of breathing, action of vocal chords in production of tone, and influence of resonating cavities upon quality; care of voice in speaking and singing.

**Methods:** Teachers-in-training will be instructed in the grading of school music to suit the development of the pupils and in methods of teaching both systems.

*References:*—Educational Music Course, Teacher's Edition.  
Teacher's Handbook of Tonic Sol-Fa System.

*Nature Study.*—Distinction from science. Purpose. Suitable materials. Methods with detailed treatment of typical topics from public school curriculum such as flowering plants, insects, birds, domestic animals, etc. Experimental work on functions and habits of animals and plants. Experimental treatment of common things as soap, salt, water, air, milk, soil, candle flame, etc. Discussion of special topics such as collections, weather records, bird migrations, aquaria, vivaria, school gardens, excursions. Relation of Nature Study to rural and urban life. Books on Nature Study.

*References.*—Comstock. Handbook to Nature Study.  
Scott. Nature Study and the Child.  
Hodge. Nature Study and Life.

#### *Physical Training.*—

Exercises for heart and lungs: deep breathing, running, hopping, rapid walking, "chopping" (with wands, dumb-bells or freehand), etc.

Exercises for the digestive organs: circlings, lateral movements of trunk, "diving," etc. (with wands, dumb-bells or freehand).

**Muscular Development:** action of the muscles. Exercises for the systematic development, with or without apparatus, of neck, trunk, arms and legs.

**Corrective exercises:** exercises for overcoming certain deformities or lack of symmetry.



Balance exercises: exercises for promoting a graceful and well-balanced carriage and co-ordination of muscles.

Military drill (for men only): the elements of squad, company and extended order drill; turning, marching, stepping, forming fours, etc., the formation of classes in position for physical drill, signalling.

Games and gymnastics, both indoor and outdoor.

Treatment of emergencies: first aid in fractures, dislocations and sprains, drowning, suffocation and fainting, cuts and hæmorrhage, and other accidents or emergencies.

Physiology and hygiene: personal hygiene, uses and care of organs of body.

*References.*—Barton. Physical Training

Infantry Training, 1911.

Gulick. Hygiene Series.

Martin. The Human Body.

Allen. Civics and Health.

Strathcona Trust. Physical Exercises for Schools.

*Reading.*—Scope of Reading: its correlation with other subjects; importance of training in reading; the pupils' previous preparation.

The processes involved in reading: the relation of ideas to symbols; the associations of visual, auditory and motor images in reading; conditions of the formation of accurate visual and auditory impressions; expression as conditioned by thought.

Forms of reading: methods in reading; examination of the various methods of teaching beginners to read; devices for securing rapid word recognition and expressive reading; changes in purpose and methods of reading as determined by the development of the pupil's experience and powers; the objects of advanced reading.

Mechanics of vocal expression; the principles of vocal expression; exercises for rendering the organs of speech subservient to the will.

*References.*—Cullen. Steps in the Phonic System.

Clark. How to Teach Reading in the Public Schools.

Department of Education. The Manual in Primary Reading.

## SEMINARS.

The seminars, each of which is a professional course of one hour per week throughout the session, include lectures, readings, reports, and discussions.

Seminars are offered in the following subjects: History of Education, Science of Education, Classics, Mathematics, English and History, Science, and Modern Languages.

## COURSES FOR SPECIALISTS.

The examinations for Specialists will test, not only the candidates' skill in teaching and their familiarity with methods of instruction, but also and in particular their knowledge of the academic work of their departments.

The topics to be discussed in the Courses for Specialists follow:

*English and History.*—(a) The course in English for candidates for specialist certificates will include the following:

A review of the work in English Grammar, Composition, and Literature as prescribed in the High School Courses of Study. A knowledge of the organization of the Course in English throughout the various Forms of the High School. A detailed study of the methods of class-room procedure in the teaching of English and problems arising therefrom

*References:*—Carpenter, Baker & Scott. The Teaching of English.  
Chubb. The Teaching of English.

(b) The work for Specialists in History will include, (i) a study of particular periods of the prescribed History. (ii) Discussion of courses in History adapted for students of various ages, and of corresponding methods of teaching.

*References:*—Allen. The Place of History in Education.  
Keatinge. Studies in the Teaching of History.  
Jäger. The Teaching of History.  
Langlois & Seignobos. Introduction to the Study of History.

*Mathematics.*—In this course will be discussed methods in trigonometry and the more advanced parts of algebra and geometry; the order of presenting the parts of these subjects so as to secure the most logical and impressive relation among the parts; the relations of the subjects themselves; the place of the teacher in dealing with more mature minds, etc.

*References:*—Schultze. The Teaching of Secondary Mathematics.  
Smith. The Teaching of Geometry.  
Young. The Teaching of Mathematics.  
Fink. A Brief History of Mathematics.

*Classics.*—The course in translation for Specialists includes an intensive study of methods with their application to the teaching of the authors read in the Upper School, such as Horace, Cicero and Homer. The course in grammar and composition for Specialists includes these topics: the object and extent of the teaching of grammar and composition in the Upper School; the relation of grammar to authors and composition; the order of the lessons; the selection of short sentences for the illustration of syntax; the construction of models for continuous prose; their relation to the text read; the methods of dealing with them in class; the best sources for continuous prose selections; typical composition lessons, oral and written.

*References:*—Bennet and Bristol. The Teaching of Latin and Greek.  
Johnston. Pamphlets on the Teaching of Caesar and Virgil.  
Hale. Pamphlets on the Art of Reading.  
Articles in the "Classical Journal".

*Modern Languages:*—This course will lay special stress upon the teaching of Phonetics, the Direct Method in the class-room, a study of French and German life, customs, and institutions, use of wall pictures, composition and reproduction work.

*References:*—Heath & Co. Report of the Committee of Twelve.  
Heath & Co. Methods of Teaching Modern Languages.  
Jespersen. How to Teach a Foreign Language.  
Savory & Jones. Sounds of the French Language.  
Bahlsen. Teaching of Modern Languages.  
Brebner. Method of Teaching Modern Languages in Germany.  
Sweet. Practical Study of Languages.  
Dumville. French Pronunciation.  
Rippmann. Elements of Phonetics.  
Breul. Teaching of Modern Languages.

*Science.*—Relation of Science to other subjects. Chief educational values of Science. Scientific periodicals and books. Lantern projection. Photography. Making of lantern slides. Laboratory furniture. Examination of and practice in use of the apparatus used in High Schools. Discussion of special topics in relation to High School curriculum.

*References:*—Canot, Watson, and Edser. Textbooks in Physics.  
Mann. The Teaching of Physics.  
Mellor. Modern Inorganic Chemistry.  
Newth. Chemical Lecture Experiments.  
Kerner. Natural History of Plants.  
Davis. Natural History of Animals.

## COURSE FOR INSPECTORS.

1. Modern Tendencies in Education and Modern Educational Systems (two examination papers).

Modern Tendencies will include such topics as: The psychological aspect of education; the development of the pupil rather than of his intellect or of the subject taught; the development of capacity as an aim of school work; the use of interests and natural tendencies for educational ends; moral and aesthetic training; the industrial aspects of school work; education for urban and rural life; medical inspection and care of physical welfare; use of examinations.

Modern Educational Systems: A comparative view of the educational systems of Great Britain, Germany, France, and United States.

*Suggested References:*—Ontario Agricultural College, Nature Study Leaflets.  
 Bailey. The Nature Study Idea.  
 Burrage & Bailey. School Sanitation and Decoration.  
 Dean. The Worker and the State.  
 De Garmo. Education and Interest.  
 Dewey. The Educational Situation. School and Society.  
 Dutton and Snedden. School Administration.  
 Kern. Among Country Schools.  
 Seath. Education for Industrial Purposes.  
 Snedden. Vocational Education.  
 Scott. Social Education.  
 Shaw. School Hygiene.  
 Balfour. Educational Systems of Great Britain and Ireland.  
 Paulsen. German Education.  
 Hughes. Making of Citizens.  
 Dexter. History of Education in United States.

2. History of Public Education in Ontario (one examination paper).

Candidates should have an intelligent conception of the Educational System of Ontario. This conception implies a knowledge of the system in its present forms, higher, and, in particular, secondary and primary, and in its historical development. References suggested here are the general histories of Canada and Ontario, portions of recent Reports of the Education Department of Ontario, the biographies of Strachan and Ryerson, Public Education in Upper Canada (Coleman), etc., Egerton Ryerson (Putman).

3. School Administration and Law (one examination paper).

Candidates should familiarize themselves in general with the Public Schools Act, the Continuation Schools Act, the High Schools Act, the Truancy Act, the Industrial Education Act, the Public Libraries Act, Department of Education Act, the Schools Sites Act and the Regulations of the Education Department of Ontario and in particular with the law and regulations in regard to the appointment and authority, qualifications and duties of inspectors.

4. School Inspection and Supervision of Instruction in Public School Subjects (one paper).

Candidates must show an intelligent appreciation of the duties and responsibilities of inspectors; they must be acquainted with the best methods of school management, and they must give evidence of competency to instruct and to supervise instruction in any of the subjects of the Public School Courses of study. The only reference suggested here is the School Law and Regulations of Ontario. For the rest the candidate must rely upon his own knowledge of official practice in inspection, and upon his own experience in school management and in class instruction, supplemented by such reports and books as he may deem pertinent.



## DEGREES IN PEDAGOGY.

### GENERAL INFORMATION.

Recent Statutes have made important changes in the former regulations as to the degrees in Pedagogy. The fee schedules have been readjusted; the courses themselves have been reorganized in sympathy with later movements in education, while they have also become more professional in purpose; and the examinations have been divided into subjects to be taken in the same or different years; and, through the staff of the Faculty of Education, the University will give assistance in the form of suggestions as to reading to all candidates for the degrees. It may be added that the Education Department of Ontario exempts the holder of the Degree of B.Paed. or D.Paed. from one or two (as the case may be) of the seven years of experience required of candidates for Inspectors' certificates.

The new Courses in Pedagogy become effective July 1, 1914. Candidates now registered in the old Courses may transfer to the new Courses, or they may remain registered in the old Courses provided that they complete such Courses not later than December, 1915. Candidates who have completed a Part or Section of an old Course will receive standing *pro tanto* if they transfer to a new Course.

### DEGREE OF BACHELOR OF PEDAGOGY.

The degree of Bachelor of Pedagogy (B.Paed.) is granted to students in the Faculty of Education under the following conditions:—

1. The candidate shall hold (a) a degree in Arts, not being an honorary degree, from any university in the British Dominions; and (b) a first class or High School Assistant's certificate granted by the Department of Education of Ontario, or a certificate of equal value.

2. The candidate shall pass an examination in the Science of Education, in Educational Psychology, in the History of Education and Educational Systems, and in Educational Administration and Organization.

3. Before he completes the examinations for the degree the candidate shall submit certificates of at least two years of successful experience in teaching.

4. The candidate shall register in the Faculty of Education at least six months before he presents himself for examination. The fee for registration is \$10. The fee for extra-mural assistance (if required) shall be \$3 for each subject.

5. The examination shall be held in December at the University of Toronto or in any other locality in the province chosen by the candidate and approved by the Senate and under a presiding examiner appointed by

the Senate, provided the candidates thereat defray the cost of the local examination. The candidate shall send notice not later than the 1st of November of his intention to take the examination and of the locality he has chosen for such examination.

6. The fee is \$10 for the full examination or \$3 for each subject if taken separately. The fee for the degree is \$20. All fees shall be paid to the Bursar with the application for registration or examination as the case may be.

7. The work in each subject may be taken and will be examined on separately. The standard for a Pass degree shall be 60 per cent. of the marks assigned to each subject. The candidate who obtains 60 per cent. of the marks of each subject and 66 per cent. of the aggregate of marks shall be awarded a degree with Second Class Honours. The candidate who obtains 60 per cent. of the marks of each subject and 75 per cent. of the aggregate of marks shall be awarded a degree with First Class Honours.

#### 8. *Subjects of Examination.*

(The bibliographies given below are not obligatory; they are suggestive only.)

(i) The Science of Education, including a study of the philosophical, ethical, and sociological bases of education. (Two papers.)

*References* :—Alexander. A Short History of Philosophy.

Watson. Outlines of Philosophy.

Mill. Utilitarianism.

Spencer. Education.

Bagley. The Educative Process.

Dewey. { The School and Society.

{ The School and the Child.

Mac Cunn. The Making of Character.

(ii) Educational Psychology. (Two papers.)

*References* :—Hall. Aspects of Child Life.

James. Text Book of Psychology.

McDougall. Physiological Psychology.

Münsterberg. Psychology and the Teacher.

Pillsbury. Essentials of Psychology.

Sandiford. Mental and Physical Life of School Children.

Titchener. Outlines of Psychology.

(iii) The History of Education and Educational Systems. (Two papers.)

*References:*—Graves. History of Education (3 vols.).

Monroe. Textbook in the History of Education.

Freeman. Schools of Hellas.

Wilkins. Roman Education.

Monroe. Source Book for the History of Education.

Woodward. Vittorino da Feltre.

Parker. History of Modern Elementary Education.

Monroe. Comenius.

Davidson. Rousseau and Education according to Nature.

Green. Pestalozzi's Educational Writings.

De Garmo. Herbart and the Herbartians.

Fletcher Walton. Froebel's Chief Educational Writings.

(iv) Educational Administration and Organization, including an examination of the present-day educational systems of Germany, France, England, and the United States. (Two papers.)

*References:*—Balfour. Educational Systems of Great Britain and Ireland.

Bolton. The Secondary School System of Germany.

Brown. American High Schools.

Butler. Education in the United States.

Dutton & Snedden. Administration of Education in the United States.

Eliot. Educational Administration.

Farrington. The Public Primary School System of France.

Farrington. French Secondary Schools.

Greenough. The Evolution of the Elementary Schools of Great Britain.

Hollister. High School Administration.

Hughes. The Making of Citizens.

Monroe. Cyclopedia of Education.

Seeley. The Common School System of Germany.

### **DEGREE OF DOCTOR OF PEDAGOGY.**

The degree of Doctor of Pedagogy (D.Paed.) is granted to students in the Faculty of Education under the following conditions.

1. The candidate shall hold a degree in Arts, not being an honorary degree, from a University in the British Dominions and a first class or High School assistant's certificate or its equivalent.

2. Before he completes the examinations for the degree, he shall submit evidence of at least three years of successful experience as teacher or inspector.

3. The candidate shall register in the Faculty of Education at least six months before he presents himself for examination. The fee for registration is \$10. The fee for extra-mural assistance (if required) is \$3 for each subject of the course.

4. The candidate shall pass an examination in the Science of Education, in Educational Psychology, in the History of Education, and in Educational Administration. He shall also submit on or before November 1st, a thesis on some educational topic selected with the approval of the Faculty of Education. In valuing this thesis literary excellence, as well as the discussion of the subject, will be taken into account. After the examiners have reported in favour of the candidate's answer papers and thesis, and before the degree of D.Paed. is conferred, the candidate shall furnish the Registrar of the University with one hundred printed copies of the thesis.

5. The examination, which may be taken as a whole or separately in subjects, shall be held at such times and under such conditions as to date of application, place of examination, division of the examination, etc., as obtain with the Bachelor's degree.

6. The fee for the whole examination is \$10, and for each subject, when taken separately, \$3. The fee for the degree is \$25. All fees shall be paid to the Bursar with the applications.

7. *Subjects of Examination.*

(The bibliographies given below are not obligatory; they are suggestive only.)

(i) The Science of Education, including a study of the philosophical, ethical, and sociological bases of education. (Two papers.)

*References:*—Bosanquet. Education of the Young in Plato's Republic.

Adams. Evolution of Educational Theory.

Bosanquet. Philosophic Theory of the State.

Adamson. Outlines of Modern Philosophy.

Hobhouse. Morals in Evolution.

Croce. Philosophy of the Practical (trans. Ainslie).

Henderson. Textbooks in the Principles of Education.

Ward. Applied Sociology.

Cooley. Human Nature and the Social Order.

(ii) Educational Psychology. (Two papers.)

*References:*—Hall. Adolescence. 2 vols.

Hobhouse. Mind in Evolution.

Huey. Psychology and Pedagogy of Reading.

James. Principles of Psychology. 2 vols.

Ladd & Woodworth. Elements of Physiological Psychology.

McDougall. Social Psychology.

Rusk. Introduction to Experimental Education.

Thorndike. Educational Psychology. 3 vols.

(iii) The History of Education and Educational Systems from 1800 to the present day, with special reference to Germany, France, Great Britain, the United States, and Ontario. (Two papers.)

*References:*—Balfour. The Educational Systems of Great Britain and Ireland.

Brown. The Making of our Middle Schools.

Coleman. Public Education in Upper Canada.

Dexter. History of Education in the United States.

Farrington. The Public Primary School System of France.

Farrington. French Secondary Schools.

Findlay. Arnold at Rugby.

Fletcher & Welton. Froebel's Chief Educational Writings.

Graves. History of Education (vol. 3).

Green. Pestalozzi's Educational Writings.

Herbart. Outlines of Educational Doctrine (Lange and De Garmo).

Monroe. Textbook on the History of Education.

Parker. History of Modern Elementary Education.

Paulsen. German Education, Past and Present.

Putman. Egerton Ryerson and Education in Upper Canada.

Russell. German Higher Schools.

Spencer. Education.

Candidates are also advised to consult, if accessible, the following:

The Special Reports of the English Department of Education.

The Reports of the United States Commissioner of Education.

The Reports of the Minister of Education, Ontario.

Monroe's Cyclopedia of Education and Hodgins' Documentary History of Education in Upper Canada.

(iv) Educational Administration and Organization in Germany, France, England, and the United States, and with special reference to the administration and organization of education in Ontario. (Two papers.)

*References:*—Brown. The Training of Teachers for Secondary Schools.

Burstall and Douglas. Public Schools for Girls.

Farrington. The Public Primary School System of France.

Farrington. French Secondary Schools.

Johnson. High School Education.

Kandel. Elementary Education in England.

Kandel. The Training of Elementary Teachers in Germany

Norwood and Hope. Higher Education of Boys in England.

Ontario. The Acts, Regulations, Instructions of the Department of Education.

Paulsen. German Education Past and Present.

Payne. Public Elementary School Curricula.

Russell. German High Schools.



Sachs. The American Secondary School and some of its Problems.

Sandiford. The Training of Teachers in England and Wales.

Seath. Education for Industrial Purposes.

Strayer and Thorndike. Educational Administration.

(Candidates are advised to consult, if accessible, the Special Reports of the Board of Education, England; the Reports of the United States Commissioner of Education, the Reports of the Minister of Education, Ontario; and Monroe's Cyclopaedia of Education.)

## **THE SUMMER SESSION OF THE UNIVERSITY OF TORONTO COURSES OFFERED BY THE FACULTY OF EDUCATION.**

I. In response to the requests of teachers who wish to improve their status the Department of Education offers the following courses in the Summer Session of 1914:

1. A Course in Manual Training for the Provincial certificate in Elementary Manual Training.

2. A course in Household Science for the Provincial certificate in Elementary Household Science.

3. A course in Vocal Music for Provincial certificates as Supervisors of Music in the Public and Separate Schools and as Specialists in High Schools.

4. A course in Physical Culture for Provincial certificates as Supervisors in Public and Separate Schools and as Specialists in High Schools.

5. A course in Commercial Work for the Elementary Commercial certificates and for Provincial certificates as Commercial Specialists.

6. A course in Parts C & D of the Examination for Entrance to the Faculties of Education.

7. A course in Part B of the Examination for Entrance to the Normal Schools.

These courses begin July 1, and last five weeks. They are followed immediately by regular Departmental Examinations. In courses 5, 6 and 7, the Faculty of Education offers guidance by correspondence in preparation for the Summer Session.

By special arrangement with the Department of Education, all these Summer Courses are offered *free* of tuition fees to teachers.

II. The Faculty of Education offers in 1914 Summer Courses in two subjects of the Courses in Pedagogy (B.Paed. and D.Paed). It also offers for those exempt from attendance, Summer Courses in the subjects of the First Class and High School Assistants' examinations.



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**FACULTY OF FORESTRY.**

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## ENTRANCE REQUIREMENTS.

For the Session 1914-15 candidates for the Degree must have passed the Junior Matriculation Examination of the University in English, History, Mathematics, German, and in two of Latin, Greek, French, Experimental Science (Physics and Chemistry). The pass standard in this examination is 40 per cent. on each paper and 60 per cent. on the average.

Admission may also be secured by candidates who (1) possess a degree in Arts, not being an honorary degree, from any Canadian, British or American university of approved standing; (2) come from other institutions whose certificates are recognised by the University of Toronto as equivalent to the above entrance requirements, and will be accepted *pro tanto*, or (3) have completed a year, or the examinations for the year, with satisfactory standing, in the Faculties of Arts, Applied Science, or Medicine.

Applications for admission upon other than these examinations or certificates and for advanced standing will be considered by the Faculty.

In addition to the academic requirements, a robust physique and good eyesight are essential in the practice of the profession, and candidates markedly deficient in these will be advised not to proceed.

Persons, not candidates for a degree, who are not less than 21 years of age, and who give evidence of sufficient ability, and especially of practical experience, to enable them to carry on with profit University courses in the subjects of the Faculty, although partly deficient in the regular matriculation requirements, may be admitted by the Faculty as *Non-Matriculated Students* on such conditions as the Faculty may determine. Such students may be required to complete matriculation and qualify for the degree within a prescribed period of time.

*Occasional Students* may be admitted to not more than three forestry subjects.

## REGISTRATION AND ENROLMENT.

Students may register with the Registrar of the University (from whom registration forms may be had) by letter at any time before the opening of the session, and are advised to do so. Students registering for the first time must present evidence of their standing, preferably by mail, before personal registration.

Students must complete their registration in person on or before the first day of the session, September 28th. On the same or the following day students will enrol with the instructors in their various courses.

The last date for registration and enrolment for 1914 is September 29th; lectures begin on September 30th.

Students who have not complied with the regulations for registration and enrolment may be admitted only upon petition to the Faculty and for good reasons. They may be refused enrolment with classes unless the head of the department is satisfied that they are able to go on with the class. A charge will be made for late registration.

No student will be allowed to continue who does not attend regularly, who wilfully disobeys rules and regulations, or whose presence is otherwise considered prejudicial to the interests of the University.

#### FEES.

##### *Regular Students in Forestry.*

First, Second, Third and Fourth Years. Annual fee, including instruction, main library, laboratory supply, and one annual examination, \$80.00.

##### *Combined Courses in Arts and Forestry.*

First, Second and Third Years. Annual fee, including College and University instruction, main library, laboratory supply, and one annual examination, \$70.00. Of this fee \$30.00 is to be paid for enrolment in one of the Colleges.

Fourth, Fifth and Sixth Years. Annual fee, including University instruction, main library, laboratory supply, and one annual examination, \$70.00.

The fees are to be paid to the Bursar of the University in advance, one-half in the month of October, and the other half in the month of January. An additional fee of \$1.00 per month will be imposed until the whole amount is paid, but in no case will the payment be allowed to be deferred more than two months.

The usual contingent deposits for covering breakages, etc., in the laboratories will be required by the departments concerned.

##### *Occasional Students.*

The annual fee for occasional students is \$5.00 for the term for each course taken.



## GENERAL FEES.

Annual deposit for the departmental library.....	\$1.00
Supplemental Examinations.....	\$10.00
Admission ad eundem statum.....	\$10.00
Degree of B.Sc.F.....	\$10.00

To defray expenses in the fall practice work, a deposit not to exceed \$50.00 will be required from Third and Fourth Year students alternate years.

## STUDENTS' COUNCIL FEE.

The Annual Fee.....	\$1.00
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Every male student in attendance, proceeding to the Degree of Bachelor of Forestry, is required to pay to the Bursar at the time of the entry of his name with the Secretary the Annual Fee of one dollar for the maintenance of the Council of the Undergraduates.

## DEGREES.

The satisfactory completion of the four-year course leads to the degree of Bachelor of the Science of Forestry (B.Sc.F.).

Graduates holding the degree of B.Sc.F., upon furnishing evidence of three years' practical employment in forestry work and the presentation of an acceptable thesis, the subject to be approved by the Faculty, will be given the degree of Forest Engineer (F.E.).

## SIX-YEAR COURSE.

Besides the regular four-year course to which the above requirements, fees and degrees refer, there is offered a six-year course, combining with the regular four-year course certain humanistic and arts subjects, this combination being intended to give a broader education than can be attained by the shorter, purely professional course. This course leads to degrees in both Arts and Forestry at the end of the six years.

Entrance to this course is secured by the same matriculation as is prescribed for the Faculty of Arts, namely, in the following subjects: Latin, English, History, Mathematics, and any two of the following, Greek, German, French, Experimental Science, preferably two languages, one of which, however, must be German.

## EXAMINATIONS AND STANDING.

No student will be allowed to write on the annual examination who has not paid all fees and dues for which he is liable. A student who fails to perform the work in his course in a manner satisfactory to his instructors will not be allowed to present himself at the final examinations except by special permission of the Council.

The standard for pass in these examinations in all courses, whether taken in the Faculty of Forestry or any other Faculty, is 50 per cent. of the marks for each subject.

In making up the final standing of each candidate much consideration will be given to the character of his work through the term, including attendance, laboratory and field work, reports and term examinations.

Candidates who *fail* at the annual examinations *in more than three subjects*, or who *fail in more than one forestry or biology subject*, cannot proceed to the next year, unless they have attained at least 70 per cent. on the average of all subjects, when their case will be especially considered.

Candidates who fail in one to three subjects at the annual examinations, only one of which may be a forestry or biology subject, may be allowed to take supplemental examinations in such subjects. These supplemental examinations must be taken in Arts subjects at dates set by the Faculty of Arts, in forestry subjects before December 15th.

Candidates are required to send to the Secretary of the Faculty at least three weeks before the date of supplemental examinations, notice in writing of their intention to take such examinations, and at the same time the fee of \$10 must be paid to the Bursar, and no student will be allowed to write who has failed to pay this fee.

If a candidate fail to pass a supplemental examination in a subject which is not basic to other subjects, he may carry it upon petition until the next examination, but if it be a subject fundamental to a subject of the year to which he wishes to advance he must take the subject over again (and if he fail in any three subjects he will be obliged to repeat the year).

No candidate for a degree will be allowed to pass into the next higher year who has not fulfilled all the requirements of the next lower year.

#### PLAN OF INSTRUCTION.

The regular course leading to the degree of Bachelor of the Science of Forestry is a four-year course, the first two years of which are mainly devoted to the study of the fundamental subjects. The last two years are mainly occupied with forestry subjects, there being also time allowed, especially in the last year, to add general educational subjects and to specialize in different directions under advice of the Dean.

One language only, namely German, is obligatory, the professional literature being chiefly in that language. Students are, however, advised, as an option, to secure also a reading and speaking knowledge of French.

The courses are distributed through the four years as follows:—

*Note.*—Numbers after the subjects refer to numbers of the courses as designated in the Calendars of the Faculties of Arts and Forestry. Where no numbers are given an option by consultation with the Dean is intended.

## I. YEAR.

## 1. Mathematics:

- a. *Algebra, Plane Trigonometry, Analytical Geometry* (1, 4, 6, or 3, 5, 7). Three or four hours through the session.

## 2. Physics:

- Elementary Physics* (9, 10). Two hours and one afternoon through the session.

## 3. Chemistry:

- Elementary Chemistry* (1, 14). Two hours and one afternoon through the session.

## 4. Biology:

- a. *Elementary Biology* (1). Two hours through the session.  
b. *Elementary Botany* (4). Two afternoons through the first term.

## 5. Forestry:

- a. *Synoptical Course* (1). One hour through the session.  
b. *Forest Botany* (2a). One lecture, two laboratory hours or field-work through the session.

6. *German*. Three hours through the session.

[*French*. Two hours through the session.]

## SUMMER WORK.

## 7. Botanical Collection (18).

## II. YEAR.

## 1. Chemistry:

- a. *Elementary Organic Chemistry* (3b). Two hours through the first term.

## 2. Biology:

- Phanerogamic Botany* (8). Two hours and two laboratory periods through the second term.

3. Geology:

- a. *Elementary Geology* (2a). Two lectures a week through the session on Geology, Mineralogy and Petrography.
- b. *Geological Excursions*. Three excursions in the beginning of the session.
- c. *Practical Mineralogy and Petrography*. Two hours a week first term, one hour a week second term.

4. *Surveying, Plane, and Map Drawing*. One lecture, and two afternoons through the session.

5. Forestry:

- a. *Forest Mensuration* (8). Two hours and one afternoon through the session.
- b. *Forest Botany* (2b). One hour through the session.
- c. *Biological Dendrology* (6). Two hours through the session; two laboratory periods through first term; one period through second term.

6. *German*. Two or three hours.

[*French*. Two hours.]

SUMMER WORK.

7. Employment on *Forest Survey*.

III. YEAR.

1. Geology:

- a. *Glacial Geology and Physiography* (10). One hour through the session.
- b. *Soil Formation*. Six lectures.

2. Biology:

*Economic Entomology* (47), including *Elementary Systematic Entomology*. 25 lectures and 25 laboratory periods through the second term.

3. *Surveying, Topographical, and Map Drawing*. One lecture and three afternoons through the session.

4. Forestry:

- a. *Silviculture* (7). Three hours through the session and occasional field excursions; one week at nurseries.
- b. *Forest Geography* (3). Two hours through the session.
- c. *Forest Utilization* (9). Thirty hours through the session and occasional visits to woodworking establishments and lumber-camps.
- d. *Timber Physics and Wood Technology* (4). One hour and two laboratory periods through one term.

5. *German*. Two or three hours through the session.

## IV. YEAR.

## 1. Chemistry:

- a. *Applied Chemistry* (12). One hour through the session.

## 2. Biology:

- a. *Cryptogamic Botany* (16 in part). Fifty hours lecture and laboratory work.
- b. *Diseases of Trees* (5), a short lecture course; the two subjects (a & b) occupying the equivalent of two hours and one laboratory period through the second term.

## 3. Political Economy (3):

- a. *A General Introduction to the study of Political Economy* (16, 3 in part). Fifty hours.

## 4. Forestry:

- a. *Management and Working Plans* (12). Three hours through the session. (This course is not given during the session 1914-15; instead course Forestry a (7) of the Third Year is taken).
- b. *Valuation and Finance* (13). One hour through the session.
- c. *History of Forestry* (14). One hour through the session.
- d. *Administration and Business Methods* (10, 15). One hour through the second term.
- e. *Forest Protection* (11). Two hours through the first term.
- f. *Seminary in German Silvicultural Literature* (16). One hour through the session.

In the Fourth Year considerable time is left open for electives, which may be used either for specializing in various directions, or for adding generally cultural subjects, or for supplementing in forestry subjects in which the student feels himself deficient. At least four hours of electives in addition to the prescribed schedule must be taken under direction of the Dean.

## SPECIAL LECTURE COURSES.

Short lecture courses by specialists for third and fourth year students may be provided on the following topics:—

1. Elementary Law for Foresters, treating of Contracts, Damages, Real Estate, Riparian Rights, Abstracts of Titles, etc. (This course is being given during session 1914-15.)
2. Administration of Timber Limits in Canada.
3. Business Methods of Lumber Trade.



4. Diseases of Trees and Preservation of Wood.
5. Problems of Prairie Planting and Farm Forestry.
6. Fish Culture and Game Preservation.
7. Development of the Lumber Industry and Lumbering Methods.
8. Canadian Forest Policy and allied subjects.
9. First Aid, etc.

#### FIELD WORK.

As far as practicable from time to time, short excursions will be made by third and fourth year students, to inspect woodlands, logging operations, mills and woodworking establishments, for which purpose Saturdays may be utilized.

Arrangements will be made with lumbermen to permit third and fourth year students to spend a week or ten days of the Christmas vacation in lumber camps for the purpose of becoming acquainted with the methods of their management. A report on the results of such inspection visits will be required.

Four to five weeks at the beginning of the session will be spent in alternate years by the students of the third and fourth years with instructors in one of the Government Forest Reserves or in private camps for practice work. During this time timber estimating, tree measurements, studies of rate of growth, forest description and forest survey, marking out for thinnings and for natural reproduction, planting, the making of working plans, and other practical woods work will occupy the students.

At or near the end of the spring term in alternate years, the government nurseries will be visited for a week, for practice in nursery work.

This work forms an integral part of the course and constitutes a requirement for the degree.

Extra expenses for such excursions not to exceed \$50 will have to be provided for by the student.

By special arrangement with the authorities of the Yale Forest School at New Haven, Conn., graduates from this Faculty will be allowed to participate in the Course on Logging given by Professor Bryant in the field during the spring term on the same terms as the Yale students.

## SCHEDULE FOR SIX-YEAR COURSE.

*Combined Forestry and Arts.*

This schedule may, with the concurrence of the Faculties concerned, be varied in order to meet the exigencies of the time-table.

*First Year.*

Latin, 1a.	Biology, 1.
English, 1a.	Forestry, 1.
German.	One of Greek and Roman History, 1;
French, 1a.	or Religious Knowledge, 1a, or 1b,
Mathematics, 1, 4, 6, or 3, 5, 7.	or 1c.
Mechanics, 1 and Physics, 1, 2, or 9, 10.	

*Second Year.*

English, 2a, 2b.	Chemistry, 1, 14.
German.	One of Latin, 2a or Physics, 3.
French, 2a.	One of Religious Knowledge, 2a, or
History, 2a.	2b, or 2c, or 2d; or Geology, 1.
Biology, 3, 4, 18.	Forestry, 2a.

*Third Year.*

English, 3a.	Biology, 8, 17.
German.	Surveying, Plane and Map Drawing.
French, 3a.	Forestry, 2b, 9.
Chemistry, 3a.	One of Religious Knowledge, 3a, or
Mathematics, 12.	3b, or 3c, or 3d, or 3e, or World
Geology and Mineralogy (see this	History, 1.
Calendar, p. 11).	

*Fourth Year.*

Geology and Physiography (10).	Chemistry, 4 or 7; or Physics, 4, 5.
Surveying (Topogr.).	One of Religious Knowledge, 4a, or
Forestry, 6, 8.	4b, or 4c, or 4d, or 4e, or World His-
History, 4a.	tory, 2.
	Extra Field Work, 4 weeks.

*Fifth Year.*

English, 4a.	Biology, 47.
Political Economy, 1b, 3.	Forestry, 3, 4, 5, 7, 11
Constitutional Law, 2.	Extra Field Work
One of Philosophy (1), or Science,	
2 hours.	

*Sixth Year.*

Chemistry, 12.

Philosophy 29.

Political Economy, 34.

Forestry, 10, 12, 13, 14, 15, 16.

Engineering.

DESCRIPTION OF FORESTRY COURSES.

1. *Synoptical Course.* An introduction to the subject of forestry and a survey of the economic and political aspects of timber land management. This course, carried on in seminary style, is designed also for students of political economy and all those who desire a general knowledge of forestry problems. 25 hours.

2. *Forest Botany.* A taxonomic study (2a) of the forest trees (dendrology) and (2b) of the minor forest flora of North America, laying special stress on the characteristics which lead to the recognition of the species in the field, with practice work in securing familiarity with morphological and other characteristics for identifying Canadian and exotic trees and shrubs, tree seeds and seedlings. 125 hours and field work.

3. *Forest Geography.* The geographical distribution, botanical composition and character of forests of the world, and of North America in particular, with special reference to the ecological factors, climate and soil, influencing forest growth. Field practice in recognizing forest types and in making forest description. 50 hours.

4. *Timber Physics and Wood Technology.* Study of the histology of wood with a view to identification of the different woods, recognition of their normal and abnormal physical characteristics and defects. Mechanical and technical properties of wood and the various technological uses dependent thereon. Lectures and laboratory work. 75 hours.

5. *Pathology of Trees and Wood.* The diseases of trees and decay of structural timber, their recognition, causes and prevention. 25 hours.

6. *Biological Dendrology.* Life history, laws of growth of trees, their dependence on ecological factors and silvicultural requirements of different species. 125 hours.

7. *Silviculture.* Principles and practice of the art of forest production and forest improvement, nursery practice, planting, and methods of natural reproduction. 75 hours. Practice work in addition.

8. *Forest Mensuration.* Methods of ascertaining volume of felled and standing trees, of whole forest growths, timber estimating, determining increment of trees and stands. 100 hours, including practice work.

9. *Forest Utilization.* Methods and means employed in the harvest of forest products, logging, transportation, milling, preparation for market, and engineering problems. 75 hours, including excursions to field operations and mills, and special lectures by expert lumbermen.

10. *Business Methods in the Lumber Trade.* Description of usages in shipping, receiving and selling forest products; inspection and grading; financial methods. 10 hours.

11. *Forest Protection.* Methods of guarding against trespass, loss from fires, insects (applied entomology) and other damage to forest crops. 25 hours.

12. *Forest Management.* Principles and methods underlying the preparation of working plans for continuous wood and revenue production. 75 hours.

13. *Forest Valuation and Finance.* Methods of ascertaining money value of forest growths and application of the principles of finance to forest management. 25 hours.

14. *History of Forestry.* Historical development of the economic and technical features of modern forestry at home and abroad. 25 hours.

15. *Forest Administration.* Principles and methods employed in the administration of forest properties. 20 hours.

16. *Seminary in German Forestry Literature.* Reading from prominent authors, especially in silviculture. 25 hours.

#### OPENINGS FOR FORESTERS.

To meet the many inquiries of students contemplating the choice of forestry as a profession—a profession still largely unknown and unpractised in Canada—the following statements may serve:

Openings for foresters may be found in four or five directions, namely, government employ, private employ, private enterprise, teaching, other business.

The Dominion Forestry Branch, which has charge of the Dominion timber lands in Alberta, Saskatchewan, Manitoba, part of British Columbia, and the unorganized territories, is employing graduates to do the technical work in exploring and classifying lands for forest reservations, surveying, mapping and determining contents of such reservations, organizing a forest fire service, controlling the grazing, timber sales and logging, and generally providing for an administration of forest reservations, of which there are now a dozen, under superintendents. These will have to work out the details of a forest management.

The Forestry Branch maintains large nurseries from which plant material is distributed for planting in the prairies; a staff of experts attend to the growing and distribution of plants, and inspect the planting.

Other field work consists in silvicultural investigations.

Statistical and technological investigations are carried on and results published at the main office in Ottawa.

Besides the permanent employment for graduates, undergraduates find their services required for the summer season as assistants.

Salaries for graduates run, at present, from \$1,200 upwards; for undergraduates, \$40 to \$75 per month, according to experience.

During the summer of 1912, the British Columbia government instituted a full-sized Forest Branch, requiring a large staff of professional men, to do similar work to that of the Dominion Branch. The need for such men has been so urgent that a number of importations from the United States had to be made to fill the positions.

The Province of Ontario has entered the field of employment of professional foresters by the appointment of a Provincial Forester, and some development requiring assistants may be looked forward to.

The Quebec government has for some time organized and developed a forest service, providing its technical men in its own way.

Private employment has been developed in several directions. The Canadian Pacific Railroad Company maintains a staff of foresters, mainly investigating timber conditions on their holdings, but eventually, no doubt, will also administer the same as forest properties for tie purposes, and otherwise.

A number of paper manufacturing companies have for some years availed themselves of the services of foresters, to survey, map, and plan operations of their forest properties. Timber limit holders have employed such for similar purposes, and the time cannot be far distant when there will be a more general development in this direction.

At least one firm of consulting forest engineers has found for several years most lucrative business, employing a number of assistants. In the United States about half a dozen such firms are operating.

As the need for professional men is growing, it is to be expected that additional educational facilities will be provided and additional teachers will be wanted, furnishing openings to a few.

Altogether, however, it needs to be understood that there will always be only a limited demand for high grade professional men, at least for some time to come; and only those with a special love and aptitude for the arduous work which is largely involved should enter the profession.

Besides the directions above outlined as offering employment for foresters, the education of foresters is such as to prepare them for shifting readily into other employment, such as park superintendents, landscape architects, nursery work, horticulture, lumberman's business in its various phases, etc.





# **CURRICULA AND REGULATIONS**

**FOR DEGREES AND DIPLOMAS.**

**LAW,**

**DENTISTRY,**

**PHARMACY,**

**AGRICULTURE,**

**PHYSICAL TRAINING,**

**VETERINARY SCIENCE.**

**CURRICULUM IN LAW.**

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**DEGREE OF LL.B.**

Candidates for the degree of LL.B. must have:

- (a) produced satisfactory certificates of conduct;
- (b) matriculated in the Faculty of Law;
- (c) passed the prescribed examinations;
- (d) attained the age of twenty-one years.

Any person having the degree of Bachelor of Arts or of Master of Arts in the University of Toronto; or any person having the degree of Bachelor of Arts or of Master of Arts of another University, who has been admitted *ad eundem gradum* in the University of Toronto; or any person who has been admitted to the Bar by the Law Society of Upper Canada, or any person who has been admitted a student at law by the Law Society of Upper Canada, and who has passed his Intermediate Examinations as required by the said Society, provided that before he be entitled to receive the degree of LL.B. he shall have been admitted as a Barrister by the said Law Society, may enter the Faculty of Law at the Third Year of the course of study in that Faculty; but prior to presenting himself for the final examination in the course of the degree of LL.B. he shall pass in addition to the examinations of the Third and Fourth Years in the Faculty of Law, the following examinations in the Faculty of Arts, viz.:—

1. ENGLISH CONSTITUTIONAL HISTORY: Honour examinations of the Second and Third Years.
2. ENGLISH AND COLONIAL CONSTITUTIONAL LAW: Honour examination of the Third Year.
3. HISTORY OF ROMAN LAW: Honour examination of the Third Year.
4. HISTORY OF ENGLISH LAW: Honour examination of the Third Year.
5. POLITICAL ECONOMY: Honour examinations of the Second or Third Year.
6. JURISPRUDENCE: Honour examination of the Fourth Year.
7. PUBLIC INTERNATIONAL LAW: Honour examination of the Fourth Year.
8. CANADIAN CONSTITUTIONAL HISTORY: Honour examination of the Fourth Year.
9. FEDERAL CONSTITUTIONAL LAW: Honour examination of the Fourth Year.

Undergraduates in the Faculty of Arts, who intend to proceed to the degree of LL.B., may take these examinations either during their Arts course or during the Third and Fourth Years of their Law course.

### Matriculation.

The Matriculation examination in the Faculty of Law shall be identical with the examination of the First Year in the Undergraduate General Course:—English; Latin; one of Greek, French, German, Hebrew; a second optional language, *or* Mechanics and Physics *or* Biology; Algebra and Geometry; Ancient History *or* Trigonometry *or* Religious Knowledge.

### First Year.

The subjects of examination in the First Year in the Faculty of Law are as follows:—

(a) Subjects of the General Course in the Faculty of Arts in which Pass standing will be required:—

1. English of the Third Year including English Composition.
- 2, 3. Any two of the following subjects of the Second Year, viz.:—Latin, Greek, French, German, Hebrew, Physics, Biology, Chemistry, Geology of which one must be a language.

4. History of the Second Year.

5. Ethics of the Third Year.

6. History of Philosophy of the Third Year.

(b) Subjects of the Political Science Course, in which Honour standing will be required:—

1. English Constitutional History of the Second and Third Years.
2. English and Colonial Constitutional Law of the Third Year.
3. Political Economy of the Third Year.
4. History of English Law of the Third Year.
5. History of Roman Law of the Third Year.

### Second Year.

The subjects of examination in the Second Year in the Faculty of Law shall be as follows, viz.:—

(a) Subjects in the Faculty of Arts in which Pass standing will be required:—

1. English of the Fourth Year of the General Course.

2, 3. Any two of the following languages of the Third Year of the General Course:—Latin, Greek, French, German, Hebrew.

(b) Subjects of the Political Science Course, in which Honour standing will be required:—

1. Modern History of the Third Year.
2. Canadian Constitutional History of the Fourth Year.
3. Public Finance of the Fourth Year.
4. Political Philosophy of the Fourth Year.
5. Jurisprudence of the Fourth Year.
6. Public International Law of the Fourth Year.
7. Federal Constitutional Law of the Fourth Year.

**Third Year.**

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| 1. Common Law.....               | Broom's Common Law.               |
| 2. Personal Property.....        | Williams.                         |
| 3. Contracts.....                | Anson.                            |
| 4. Medical Jurisprudence.....    | Reese.                            |
| 5. Equity.....                   | { Snell.                          |
|                                  | { Marsh [History of the Court of  |
|                                  | { Chancery].                      |
|                                  | { Institutes of Justinian.        |
|                                  | { Bk. 1, titles 1, 2, 3.          |
| 6. Theory of Obligation.....     | { Bk. 3, titles 13-39.            |
|                                  | { Bk. 4, title 1.                 |
|                                  | { Mackenzie, Roman Law, Part III. |
| 7. Canadian Constitutional Law.. | Clement.                          |

Additional subjects for candidates for the American Law Book Company's Prize:—

8. The Law of Companies. Lindley, Law of Companies.

9. Municipal Law. The Powers of Municipal Corporations to make contracts, and the manner in which they may contract; the general principles governing the exercise of these powers to pass by-laws; and their powers to create or establish highways and their liabilities with respect to the same when created.

The Act respecting Municipal Institutions (R.S.O. 1897, c. 223), and Biggar's Municipal Manual.

Each candidate for the American Law Book Company's Prize must present a thesis upon some subject relating to either of the additional subjects on or before the 31st of March in the year in which he presents himself for examination in his Third Year in the Faculty of Law. The subject of the thesis for the Prize for 1915 is "The advantages and disadvantages from a legal point of view and otherwise of the government of cities by Commission under special Act, as compared with the present system under the Municipal Act".

**Fourth Year.**

- |                                   |  |
|-----------------------------------|--|
| 1. Law of Torts.....              | { Bigelow, English ed.                   |
|                                   | { Pollock.                               |
| 2. Law of Real Property.....      | { Digby.                                 |
|                                   | { Armour's Real Property.                |
|                                   | { Blackburn on Sales, with notes of      |
|                                   | { Canadian cases by Mr. Justice          |
| 3. Commercial Law.....            | { Russell, omitting Chapters 3 and       |
|                                   | { 4 of Part II.                          |
|                                   | { Maclaren, Bills and Notes.             |
| 4. Private International Law..... | Westlake.                                |
| 5. Corporations.....              | Brice on <i>Ultra Vires</i> , Parts 1, 2 |
|                                   | and 3                                    |



6. Construction and Operation of Statutes..... Hardcastle.
7. Criminal Law..... { Harris.  
Criminal Code and amendments,  
excepting as regards Procedure.
8. Domestic Relations..... Eversley, Parts 1, 2 and 3.

Each candidate for the degree of LL.B. must present a thesis satisfactory to the examiners in Law, upon some subject embraced in the curriculum, on or before the 31st March in the year in which he presents himself for examination in his Fourth Year in the Faculty of Law, or on or before the said date in any subsequent year. The subject of the thesis will be prescribed by the Senate, and will be announced at least eight months before the date upon which it is due. An oral examination on the subject of the thesis may be required at the option of the examiners in Law. Candidates for the degree may defer presenting the thesis until a subsequent annual examination, in which case the fee for examination shall be \$10.

### Fees.

The following fees must be paid:—

For matriculation or entrance.....	\$10.00
For each examination after matriculation.....	10.00
For each supplemental examination.....	10.00
For the degree of LL.B.....	20.00
For admission <i>ad eundem gradum</i> , LL.B.....	20.00

A candidate will not be admitted to an examination unless he has paid all the fees due from him. A candidate who fails to pay his examination fees on or before the fifteenth of March—the last day for receiving fees prior to the May examination—must pay an additional fee of one dollar.

A candidate who fails to send his application for examination by the day appointed for receiving such applications must pay an additional fee of one dollar.

### Examinations.

The examinations will take place in the month of May.

Every student who purposes presenting himself at any examination is required to send to the Registrar, not later than March 15th, a paper (according to a printed form which will be provided on application) stating his standing, and whether he is a candidate for Honours or otherwise.

Candidate who at any examination have failed in not more than two subjects may, with the consent of the Senate, present themselves for examination in such subjects at the next ensuing Supplemental examinations.

Undergraduates below the Fourth Year in the Faculty of Law, who have been rejected or who have been prevented from attending the Annual examinations in May by sickness or other cause beyond their control, may, with the consent of the Senate, present themselves in September, at the time of the Supplemental examinations in Arts.

Candidates in the Faculty of Law shall not be required to pass an examination on those subjects in which they have already passed the required examination in the University of Toronto, or an equivalent examination in the course of studies prescribed by the Law Society of Upper Canada.

Candidates who have taken the course at the Law School are required to present to the Registrar a certificate from the Secretary of the Law Society, showing the subjects in the Law School curriculum on which the candidate has passed examinations at the said school, and such certificates shall entitle the candidate to exemption from examination on the subjects mentioned in said certificate, where said subjects are included in the University curriculum in Law.

### **Subject of Thesis.**

The following is the subject for Thesis for candidates for LL.B. for the year 1915, viz.:—The Prerogatives of the Crown in the Dominion and the Provinces.

### **DEGREE OF LL.M.**

Candidates for the said Degree must have been admitted to the Degree of Bachelor of Laws, must be of the standing of one year from admission to the Degree of Bachelor of Laws, must have presented a thesis satisfactory to the examiners in Law, and to the special examiners of such thesis appointed by the Senate, on some branch of law or of the history or philosophy of law, and must have passed the following examinations in the Faculty of Law, viz.:—

1. Roman Law: Sohm, Institutes of Roman Law.
2. Criminal Law: Stephen, History of the Criminal Law (omitting chapters on History of Procedure, Summary Jurisdiction, and Indian Criminal Law).
3. History of English Law: Pollock and Maitland, History of English Law.
4. English Constitutional Law: Gneist, History of the English Constitution; Select Cases in Constitutional Law—Broom, Constitutional Law, Part II. (Relation of the Subject to the Executive); and Part III. (Relation of the Subject to Parliament); Todd, Parliamentary Government in England.
5. Canadian Constitutional Law: Lefroy on Legislative Power in Canada; and subsequent reported cases on the subject.
6. Public International Law: Freeman Snow's leading cases on International Law; Lawrence, International Law.
7. Jurisprudence: Bryce, Studies in Jurisprudence; Hall, Foreign Jurisdiction of the British Crown; Salmond. Jurisprudence.

### 8. Civil Code of Quebec.

The thesis must be sent to the Registrar in typewritten or printed form, not later than the thirty-first day of March.

The Senate may appoint special examiners for the whole or any part of the work prescribed for examinations for said degree.

The fee for the said degree shall be thirty dollars (\$30.00).

### Certificates of Honour.

Certificates of Honour will be given at each examination to those students who have been placed in Honours. The fee for such certificates shall be one dollar.

### Prizes.

The Edward Thompson Company's Prize of the first twenty-five volumes of the American and English Annotated Cases will be awarded to that undergraduate of First Year standing who as a candidate for the examination of the Second Year submits the best thesis on some branch of the law of Personal Property, of Contracts or of Trusts. The subject for 1915 is "A study of the law of Trusts in relation to personal property".

The Canada Law Book Company's Prize of a set of Halsbury's Laws of England will be awarded to that graduate of this University who having completed his course in the department of Political Science, and having passed the First Year examination at Osgoode Hall, has written a thesis on some portion of the work prescribed in the first examination at Osgoode Hall. The subject for 1915 is "A comparative study of the constitutions of Canada and Australia".

The award of these two prizes shall be made to the candidate who obtains the highest aggregate number of marks on all the subjects of the second examination and also the highest number of marks for the thesis and is recommended for the Prize by the regular and special examiners in Law. The thesis shall be sent to the Registrar, in typewritten or printed form, not later than the thirty-first of October, signed by the candidate's pseudonym, and shall be submitted to the special examiners for adjudication and report to the Senate. The special examiners shall, before the day of examination, fix the maximum number of marks to be allowed, and the minimum number of marks which must be obtained on the thesis. In determining the merit and value of the thesis, the examiners shall attach special importance to the literary qualities, and to the amount of original thought, research and investigation, which have been shown by the candidate in his treatment of the subject of the thesis.

The American Law Book Company's Prize of a complete set of their Cyclopædia of Law and Procedure will be awarded to the successful candidate in the Third Year who shall have obtained the highest aggregate number of marks in all the subjects of examination prescribed in the curriculum for said year, and also in the additional subjects of the Law of

Companies and Municipal Law, prescribed for the said Prize, including a thesis upon some subject relating to either of those two additional subjects, and who shall be recommended for said prize by the examiners in Law and by the special examiners appointed to examine the thesis submitted by such candidates.

The Edward Thompson Company's Prizes of the American and English Encyclopædia of Law and of the Encyclopædia of Pleading and Practice will be awarded to the candidates for LL.B. who shall have received the highest and second highest aggregate number of marks at the examination for that degree in the Faculty of Law in all the subjects prescribed for the Fourth Year, including the thesis upon a legal subject, required of such candidates, and who shall be recommended for the Prizes by the examiners in Law, and the special examiners appointed to examine the thesis submitted by such candidates.

The American Law Book Company's Prize of a complete set of their Cyclopædia of Law and Procedure will be awarded to the successful candidate for LL.M. who shall have obtained the highest aggregate number of marks at the examination for the said degree, including a thesis upon some branch of Law or of the history or philosophy of Law, and who shall be recommended for the said prize by the examiners in Law and by the special examiners to be appointed by the Senate to examine the theses submitted by such candidates.

### **Standards.**

The standing for passing shall in the case of Arts subjects be fifty per cent., and in the case of the Law subjects be fifty per cent. on each subject of an examination, with an average of sixty per cent. on the whole. The standard for Honours shall be an average of seventy-five per cent. of the marks assigned to all the subjects of the Year.

### **Works of Reference.**

American and English Annotated Cases, American and English Encyclopædia of Law, Cyclopædia of Law and Procedure, Encyclopædia of Pleadings and Practice, Halsbury's Laws of England.



**CURRICULUM IN DENTISTRY.****DEGREE OF DOCTOR OF DENTAL SURGERY.****Matriculation.**

A candidate for the Degree of Doctor of Dental Surgery must either:

1. Possess a degree in Arts (not being an Honorary Degree) from some recognized University; or
2. Have matriculated in the Faculty of Arts in this or some other University in Canada; or
3. Have matriculated with the College of Physicians and Surgeons of Ontario; or
4. Possess a certificate which is accepted by the General Medical Council of Great Britain for registration as a student of Medicine or Dentistry.
5. Possess the certificate of having passed the Normal Entrance or Entrance to the Faculty of Education Examination in which the Latin Option has been taken, it being understood that equivalent examinations of this Province under titles no longer in force will be accepted.

The following certificates of other provinces are recognized as equivalent to the Ontario Certificates:

- Associate in Arts (Quebec).
- Superior and Grammar School Licenses (New Brunswick).
- Junior and Senior Leaving (Nova Scotia).
- First and Second Class Teachers (Manitoba).
- Intermediate and Senior Grade (British Columbia).
- First Class Teachers License (Prince Edward Island).
- Standards Seven and Eight (Alberta).
- First and Second Class (Saskatchewan).

A candidate whose Teacher's Certificate does not include Latin may complete his Matriculation in Dentistry by passing in the two Latin papers of Junior Matriculation, or at similar examinations conducted by the University or Education Department of a Province. Such a candidate must obtain forty per cent. on each paper and fifty per cent. on the average.

The Senate will consider and determine the equivalence, in whole or in part, of certificates issued by other institutions, and presented by students seeking matriculation in this University.

Candidates for the degree must complete matriculation before writing on any of the subjects as prescribed for the Third Year of the course at the Royal College of Dental Surgeons of Ontario.



### **Undergraduates.**

1. Undergraduates (candidates for final examination for the degree), matriculants in the Royal College of Dental Surgeons of Ontario, an affiliated College of the University, and proceeding to graduation therefrom, must have complied with all the requirements prescribed from time to time, by the Board of Directors of the Royal College of Dental Surgeons of Ontario, for admission to examination for a certificate of License to practise Dentistry in Ontario, provided always that these requirements shall include attendance on at least four full courses of lectures and laboratory and clinical instruction, embracing all the subjects of the curriculum, of not less than seven months each, except in the case of students who have already graduated in the Faculty of Arts (B.A. or M.A.), or the Faculty of Medicine (M.B. or M.D.), or the Faculty of Science (B.A.Sc. or B.Sc.), of a Canadian or other recognized University, who may complete the course in Dentistry in three years instead of four.

2. Persons holding the L.D.S. certificate, granted by one of the Medical Authorities of Great Britain, and persons holding the B.D.S. Degree of Melbourne University, Australia, will be admitted as undergraduates in the Department of Dentistry, without further examination, and to the final examinations for the Degree of D.D.S., on completing one full session at the School of Dentistry of the Royal College of Dental Surgeons of Ontario, and payment of the proper fees.

3. Undergraduates (candidates for examination for the degree) not coming under the provisions of either of the two preceding sections must have been engaged in the study of Dentistry for four academic years and have attended four full courses of lectures and laboratory and clinical instruction, embracing all the subjects of the Curriculum, of not less than seven months each, at a School of Dentistry recognized by this University, the last of which must have been at the School of Dentistry of the Royal College of Dental Surgeons of Ontario.

### **Examinations.**

Candidates for the degree must pass two examinations, an intermediate and a final, an interval of not less than one year intervening between them. Until further provision be made a certificate of having passed the intermediate examination of the Royal College of Dental Surgeons of Ontario will be accepted by this University.

Candidates for the final examination, which will be held at a time fixed by the Committee on Examinations, must present to the Registrar satisfactory certificates, covering all the requirements relating to undergraduates as given above, and of having passed the intermediate examination. The subjects for intermediate examinations shall be:—

- (a) Comparative Dental Anatomy.
- (b) General and Dental Histology.
- (c) Anatomy.

- (d) Physiology.
- (e) Chemistry (Theoretical and Practical).
- (f) Dental Technic.
- (g) Theory of Operative Dentistry.
- (h) Theory of Prosthetic Dentistry.
- (i) Dental Materia Medica.

The subjects for final examinations shall be:—

- (a) General Anatomy and Special Anatomy of the Head and Neck.
- (b) Bacteriology.
- (c) Physiology.
- (d) Chemistry (Theoretical and Practical).
- (e) Surgery and General Pathology.
- (f) Medicine, Physical Diagnosis and Anaesthetics.
- (g) Theory and practice of Operative Dentistry, Dental Pathology.
- (h) Theory and practice of Prosthetic Dentistry.
- (i) Science and practice of Dentistry.
- (j) Orthodontia.
- (k) Dental Materia Medica and Pharmacology.
- (l) The Jurisprudence, Ethics and History of Dentistry.

(These examinations will be written.)

- (m) Practical Operative Dentistry.
- (n) Practical Prosthetic Dentistry.

Candidates shall be examined in practical work from time to time, during the session of the Royal College of Dental Surgeons, on completion of the required work in the Infirmary and Laboratories of the College.

Annual examinations in April and supplemental examinations in September will be conducted under the joint auspices of the University and of the Royal College of Dental Surgeons of Ontario.

Regular students of the Royal College of Dental Surgeons proceeding to the degree of D.D.S., may take the final examination in any subject at the close of the session in which it is completed in the College.

Candidates will be credited at the Annual and Supplemental examinations for term work and term examinations conducted by the professors in the several subjects, in the proportion of 30 to 70.

No candidate shall be considered as having passed on any paper unless he has obtained 50 per cent. of the marks allotted to the paper.

### **Equivalent Examinations.**

Examinations in the Faculty of Arts in the Departments of Biology and Biological and Physical Sciences are accepted in lieu of examinations for the degree of Doctor of Dental Surgery, as follows:—

- (a) Physiology and Chemistry of the Second Year for the Physiology and Chemistry of the intermediate examination.
- (b) Histology of the Fourth Year for the General Histology and Bacteriology of the intermediate examination.

(c) Chemistry of the Third Year and Physiology of the Fourth Year for Chemistry and Physiology of the final examination.

(d) On application to the Senate, similar credit may be given for similar examinations passed in the Faculty of Arts or the Faculty of Medicine of other universities.

### **Fees.**

The fee for matriculation, or for registration of any certificate accepted in lieu of examination, shall be five dollars.

The fee for final examination shall be ten dollars, which shall be paid before writing on any subject of the final examination.

The fee for supplemental examination in one or more of the final subjects shall be ten dollars.

The fee for the degree of D.D.S. shall be fifteen dollars, which shall be paid before writing on the examination of the final year.

No fee shall be charged for transference from any Faculty of the University to the Department of Dentistry.

The fee for admission *ad eundem gradum* shall be twenty dollars.

### **Concurrent Course in Medicine and Dentistry.**

Students who are matriculants in the Faculty of Medicine and in the Department of Dentistry may take a concurrent course in Medicine and Dentistry which will extend over seven years.

Students taking this course will pass the regular University examinations in the subjects of the Medical curriculum from year to year as they are completed in the Medical Faculty, and in the final Dental subjects of the curriculum in Dentistry from year to year as they are completed in the Royal College of Dental Surgeons.

Students taking this concurrent course, who have fulfilled all the requirements for the degree of M.B., and who have successfully passed the examination in the Dental subjects of the curriculum in Dentistry, including Dental Materia Medica and Therapeutics, shall receive the degree of D.D.S.

The fee payable to the University shall be \$50 per year for the first four years, and \$150 per year for the last three years, together with the several laboratory fees.

## CURRICULUM IN PHARMACY.

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### DEGREE OF BACHELOR OF PHARMACY.

#### Matriculation.

Candidates for the degree of Bachelor of Pharmacy must either:—

1. Possess a degree in Arts (not an Honorary degree) from some recognized University; or
2. Have already matriculated in the Faculty of Arts in this or some other University in Canada; or
3. Be matriculants in the College of Physicians and Surgeons of Ontario; or
4. Have passed the Junior or Senior Teachers' examinations of the Education Department of Ontario in which Latin has been taken.

Provided always that all candidates registered as apprentices of the Ontario College of Pharmacy, or who have received the diploma of the College of Pharmacy up to the first day of July, A.D. 1898, shall be admitted as matriculants in the Department of Pharmacy on payment of the registration fee of five dollars.

#### Regulations.

Undergraduates (candidates for the degree) resident in the Province of Ontario must have complied with all the requirements prescribed from time to time by the Council of the Ontario College of Pharmacy for admission to examination for a diploma licensing to practise Pharmacy in Ontario, and must have received from the Registrar of the Ontario College of Pharmacy a certificate of having passed the final examination of that College.

Candidates for the degree, not resident in Ontario, must have devoted at least four years (not being engaged in any other business) to the study of Pharmacy, being apprenticed during that time to a regularly qualified Pharmaceutical Chemist; must have attended the full courses of lectures embracing all the subjects of the curriculum, the length of each course being not less than that required from time to time by the Council at the Ontario College of Pharmacy, and including practical work of some College of Pharmacy recognized by this University; the last of which courses must be taken at the Ontario College of Pharmacy.

All candidates who have, prior to August 15th, 1892, received the diploma of the Ontario College of Pharmacy will not be required to conform to the above, but will be allowed their degree on passing the examination on the subjects hereinafter given.



**Examinations.**

Candidates for the degree must pass an examination to be held in the month of May of each year—hour and date of commencing to be hereafter given—must present to the Registrar satisfactory certificates covering all the requirements relating to undergraduates as given above, and of having passed the final examination of the Ontario College of Pharmacy.

The subjects of the examination shall be as follows:—

1. Botany and Microscopy.
2. Theory and Practice of Chemistry and Toxicology.
3. Materia Medica, including Posology and Pharmacognosy.
4. Theory and Practice of Pharmacy, including interpretation of Prescriptions and Dispensing.

These examinations shall be partly written, partly oral and partly practical.

No candidate shall be considered as having passed the examination who has not obtained fifty per cent. of the marks allotted; nor shall a candidate be considered as having passed in any subject who has not obtained at least forty per cent. of the marks allotted to such subject.

**Fees.**

For matriculation or registration of matriculation.....	\$5.00
For annual examination (each) .....	10.00
For each practical examination.....	0.50
For the degree of Phm.B. ....	10.00

No fee shall be charged for transference from any Faculty of this University to the Department of Pharmacy.



## CURRICULUM IN AGRICULTURE.

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### ADMISSION TO THIRD YEAR STANDING.

An Associate of the College is admitted to third year standing and allowed to proceed with the work of Third and Fourth Years:—

(1) Provided he has taken rank in his Associate Course satisfactory to the College Staff, 60 per cent. of the marks in English and 50 per cent. in general proficiency.

NOTE.—In addition to the above, candidates intending to take the *Agriculture Option* must present satisfactory evidence of having spent at least two years at practical work with a good farmer; those entering for the *Dairy Option* must have spent one season at practical work in a cheese factory and one in a creamery, or have spent one season in a cheese factory or creamery, and have taken the full course (cheese and butter) in a Dairy School, or have spent at least two years on a dairy farm; and those entering for the *Horticulture Option* must have spent at least one year at practical work with a good fruit grower, market gardener, or florist.

A graduate or undergraduate in Arts and Science of any reputable University, having had the necessary training in farm work, may proceed to the degree, upon presenting certificates of standing satisfactory to the head of the department to which the certificate relates, and approved by the President, and passing examinations on subjects not covered by his certificates.

The work done previously by such a candidate will be accepted *pro tanto* for any part of the work prescribed for the degree, provided he submits to the President all credentials and records of standing from other institutions.

### Third Year (for the B.S.A. Degree).

Attendance and Term Work for Third and Fourth Years.

NOTE.—Any candidate before being passed on any examination must have attended at least seventy-five per cent. of the lectures and seventy-five per cent. of the laboratory periods in each subject, and must have obtained at least fifty per cent. of the marks for term work in each department and sixty per cent. in all departments together. "Attendance" and "Term Work" rank as separate subjects.

**The Course of Study.**

Botany	{ Cryptogamic. Plant Physiology.
Chemistry	{ Inorganic. Qualitative Analysis. Organic. Quantitative Analysis.
English	{ Composition. Literature. Public Speaking.
Entomology.	
German.	
Geology.	
Physics	{ Heat. Cold Storage. Meteorology.
Animal Husbandry.	
Bacteriology.	
Horticulture.	

NOTE.—The time allotted to each subject *per week* is indicated as follows:

"L" represents a lecture period of 50 minutes.

"Lab." represents a laboratory period of one hour and a half.

1. BOTANY.—[2 "L" and 2 "Lab." fall and winter term.]

(1) Physiology and Histology.—Plant Physiology (Duggar).

(2) Cryptogamic.—A study of the chief types (Coulter, Barnes and Cowles, Vol. 1).

2. CHEMISTRY.—[3 "L" and 4 "Lab." fall and winter term.]

(1) Historical Chemistry.—(8 lectures.)

(2) Inorganic Chemistry.—Text-book (Newth).

(3) Qualitative Analysis.—A comprehensive laboratory course during the fall term. Text-book: A Junior Course of Practical Chemistry (Jones).

(4) Organic Chemistry.—Text-book: Theoretical Organic Chemistry (Cohen).

(5) Quantitative Analysis.—Laboratory practice in gravimetric and volumetric analysis. Text-book: Elementary Quantitative Analysis (Lincoln and Walton).

Reading.—As assigned.

3. ECONOMICS.—[2 "L" fall and winter terms.] A study of the conditions of Canadian Agriculture. The factors of Agricultural Production. It is the aim to familiarize the student with the resources of Canada, and with the part played by Canada in the world's food supply. Markets, Transportation, International Trade and Tariffs are discussed with special reference to Canada. A study of the farmer's relation to the general problems of industrial development.

4. ENGLISH.—[3 "L" fall term.]

[3 "L" and 2 "Lab." winter term.]

(a) Journalism.—Lectures and practice in the writing of news, press bulletins, etc.

(b) Public Speaking.—A continuation of the practice in public speaking as outlined under second year English.

(c) English Poetry from Thomson to Keats, in Manly's English Poetry, with special reference to Natural Description. English Prose from 1600 to 1830 in Manly's English Prose. Hardy's "Far from the Madding Crowd".

5 ENTOMOLOGY.—[2 "L" and 2 "Lab." fall and winter term.]

(a) Economic Entomology.—Detailed study of injurious and beneficial insects and the best methods of preventing the ravages of the former. Sanderson's "Insect Pests of the Farm, Garden and Orchard"; Chittenden's "Insects Injurious to Vegetables".

(b) Systematic Entomology.—A laboratory and lecture course in the identification and classification of insects. Each student is required to collect and mount at least 150 insects representing as many orders as possible. From these collections the Department reserves the right to appropriate specimens of any species not represented in the College collection. Sanderson's and Jackson's "Elementary Entomology"; Comstock's "Manual for the Study of Insects".

6. GERMAN.—Elementary Scientific German. Text: Moffat, "Science German Course".

(a) Grammar—Sections 1-113. Special application of Grammar rules to translation.

(b) Translation.—(Elementary.) Selected passages 1-20, also (German Types) 89-99.

7. GEOLOGY.—[2 "L" fall and winter term.] A practical course, dealing especially with the geology of North America, soil formation, and economic deposits. Text: An Introduction to Geology (W. B. Scott).

8. PHYSICS.—[2 "L" and 2 "Lab." fall term.]

[2 "L" and 1 "Lab." winter term.]

(a) Heat (Text: Glazebrook's Heat); (b) Meteorology (Davis); (c) Ventilation and Cold Storage. Texts: Ventilation, King's Ventilation for Dwellings, Rural Schools and Stables; Cold Storage; Cooper's Practical Cold Storage.

9. BACTERIOLOGY.—[2 "L" fall term.]

10. ANIMAL HUSBANDRY—[1 "L" fall and winter terms.]

NOTE.—Students intending to take the Fourth Year shall select their option not later than the 1st of April in the Third Year, after consultation with the head of the department concerned; and shall then notify the President of their selection and its approval by the Head above referred to.

**Fourth Year (for the B.S.A. Degree).**

One of the following options:—

- |                  |                           |
|------------------|---------------------------|
| 1. Agriculture.  | 4. Chemistry and Physics. |
| 2. Bacteriology. | 5. Dairy.                 |
| 3. Biology.      | 6. Horticulture.          |

**Standard for Pass and Honours in Fourth Year Examinations.**

Major Subjects: I. 75 per cent.

II. 60 per cent.

III. 40 per cent.

Each student must obtain an average of 50 per cent. on all major subjects.

Minor Subjects: A. 75 per cent.

B. 50 per cent.

C. 33 per cent.

**Fees.**

Each examination.....	\$10.00
Degree.....	10.00

**Thesis.**

Each fourth year student is required to prepare a Thesis on some branch or department of the work in his special course under the direction of the Professor or Instructor in whose department the work is done. The subject is to be chosen not later than the end of the third year, and submitted for the approval of the Staff on or before April 1st. The Thesis must be based chiefly on original investigation. It must be typewritten on letter-sized paper, and handed to the committee of adjudication on or before the 1st of April of the fourth year.

**Agriculture Option.**

See note under "Admission to Third Year Standing", page 16 of this calendar; also Attendance and Term Work for third and fourth year students, page 16.

NOTE.—The time allotted to each subject per week is indicated as follows:

"L" represents a lecture period of 50 minutes.

"Lab." represents a laboratory period of one hour and a half.

**MAJORS:**

1. ANIMAL HUSBANDRY.—[2 "L" and 4 "Lab." fall term.]

[2 "L" and 6 "Lab." winter term.]

(a) Horses, cattle, sheep and swine. Characteristics of the principal breeds; lectures and practical work in judging.

(b) Principles and practice of stock breeding. Text-books: "Principles of breeding" (Davenport); "Heredity" (Thompson). "Breeding Farm Animals" (Marshall).

(c) Feeding and Management of live stock. Text-book: "Feeds and Feeding" (Henry).

(d) Poultry.—[1 "Lab." fall term, 1 "L" spring term.] Buildings, feeding and management; principal breeds. Text: "Principles and Practice of Poultry Culture" (Robinson).

Each student shall be required to operate at least one incubator, to rear one brooder of chicks to four weeks of age, to feed and care for one pen of laying hens for one month, and to crate, fatten, kill and dress one dozen birds.

Reading.—As assigned.

## 2. FIELD HUSBANDRY.—[2 "L" fall and winter terms.]

Advanced course in field crops: systematic breeding of cereals, legumes, etc.; agricultural organization throughout the world; experiment stations and their work; results of field experiments; practical judging of seeds, roots, potatoes, grasses and clovers.

Reading.—As assigned.

## 3. CHEMISTRY.—[3 "L" and 4 "Lab." fall term.]

[2 "L" and 4 "Lab." winter term.]

(a) Soil Chemistry.—As outlined in Chemistry and Physics Option, Section 1, Part B.

(b) Animal Chemistry.—As outlined in Chemistry and Physics Option, Section 1, Part D.

(c) Laboratory Work.—A comprehensive course of analysis of soils, manures, fodders, condimental and stock foods.

(d) Chemistry of Insecticides and Fungicides [Minor].

Reading.—As assigned.

## 4. PHYSICS.—[2 "L" and 2 "Lab." fall and winter terms.]

(a) Climatology as under Physics, Section A, in the Chemistry and Physics Option.

(b) Soil Physics as under Physics, Section B, in the Chemistry and Physics Option.

(c) Tillage and Drainage as under Physics, Section C, in the Chemistry and Physics Option.

Reading.—As assigned.

## 5. THESIS.—As outlined on page 19.

### MINORS:

#### 1. ENGLISH.—[2 "L" fall and winter terms.]

(a) Journalism.—A continuation of the work outlined in the third year course; technical reports, interviews, editorials, etc.



(b) English Literature.—The Victorian Age of English Poetry, in Manly's English Poetry, with special reference to Natural Description. The Victorian Age of English Prose in Manly's English Prose.

**2. ECONOMICS.**—[1 "L" fall and winter terms.]

The course offered the graduating class deals almost entirely with Agricultural organization and the problems arising therefrom. The study of markets and transportation is continued. Local Co-operative Associations are studied critically and comparisons drawn between Canadian methods of co-operation and those of the leading co-operative countries, such as Denmark, Germany and France. The difficulties attending organizations are dealt with in this course, and the student is instructed with regard to the formation and successful operation of a society. The farmer's position as compared to that of the manufacturer; his needs of business training; his financial problems—means of obtaining credit, commercial transactions, etc., are given as much attention as the time allotted to the course will permit.

**3. GERMAN.**—Scientific German.

(a) Translation.—Advanced selections in Chemistry, Geology, Botany, Zoology.

(b) Grammar.—As outlined in the text-book. Special application of rules of syntax to the translation given. Easy sight translation. Text: Moffat, "Science German Course".

**4. BOTANY.**—[1 "Lab." fall term.]

[2 "L" winter term.]

(a) Systematic botany: grasses, weeds and forage crops; (b) fungi and fungous diseases. Texts: Agricultural Botany (Percival). Fungous Diseases of Plants (Duggar).

*COLLECTIONS.*—50 specimens (25 of which are to be grasses or forage plants, and 25 to be fungi, representing the diseases of vegetables and cereal crops); specimens to supplement the collections of the second and third year, and not to repeat them.

**5. BACTERIOLOGY.**—4 "L" per week, fall term, on microbial diseases of animals, their prevention and eradication; bacterial diseases of plants; microbiology of the soil; microbiology of water and sewage; microbiology of milk and milk products; microbiology of fermentation. Text: Microbiology (Marshall).

**Fourth Year (for the B.S.A. Degree).**

**Bacteriology Option.**

See note under "Admission to Third Year Standing", page 16 of this calendar; "Attendance and Term Work" for third and fourth year students; also time allotted to each subject per week.

**MAJORS:**

1. **BACTERIOLOGY.**—[12 "L" and 6 "Lab." fall and winter terms.]

(a) **Microscopical Methods.**—A study of the morphology of micro-organisms by the examination of living cultures and various staining methods: preparation of morbid specimens, embedding of tissues and section cutting.

(b) **Cultivation Methods.**—Apparatus, principles of sterilization, preparation of culture media, and various means employed in the cultivation of different types.

(c) **Physiologic Bacteriology.**—Chemical composition, nutrition, circumstances affecting growth, products of growth, chromogenic, zymogenic, toxic and pathogenic bacteria. Studies in symbiosis, metabiosis and antagonism. Studies in enzymes.

(d) **Examination of Air, Water, Soils and Foods.**

(e) **Hygienic Bacteriology.**—Infectious diseases; anthrax, symptomatic anthrax, tuberculosis, glanders, typhoid fever, hog cholera, diphtheria, actinomycosis, pyemia, fowl and insect diseases; toxins and antitoxins, susceptibility and immunity, attention of virus, protective inoculation; serum-therapy.

(f) **Fermentation Bacteriology.**—Micro-organisms of fermentation, enzymes; fermentations: alcoholic, acetic, lactic, butyric, ammoniacal, putrefactive, nitrification, denitrification.

(g) **Agricultural Bacteriology.**—Relation of micro-organisms to tillage of the soil; management of the compost heap; bacteria and the farm water supply; disposal of sewage; bacteria and pure milk production; principal diseases of animals.

(h) **Dairy Bacteriology.**—The relation of micro-organisms to dairying; the fermentation of milk; pure culture system in butter and cheese making; pasteurization and sterilization; the bacteriological analysis of milk, butter and cheese; sanitary milk production; diseases conveyed by dairy products.

(i) **Chemistry of Fruits, Vegetables and Fermentations.**

Reading.—As assigned.

2. **THESIS.**—As outlined on page 19.

**MINORS:**

1. **ENGLISH.**—As in the Agriculture Option.

2. **ECONOMICS.**—As in the Agriculture Option.

3. **GERMAN.**—As in the Agriculture Option.

4. **BOTANY.**—[2 "L" and 2 "Lab." fall term.] Section 1, Parts D and E, in the Biology Option.

5. **ZOOLOGY.**—[2 "L" and 1 "Lab." fall and winter terms.] Section 2, Parts A, B, D, F, in the Biology Option.

6. **PHYSIOLOGY.**—As in 3 F, Biology Option.

7. **CHEMISTRY.**—(a) Animal Chemistry as in Section 1, Part D, Chemistry and Physics Option.

(b) Chemistry of fruits, vegetables and fermentation, Section 1, Part F, Chemistry and Physics Option.

#### **Fourth Year (for the B.S.A. Degree).**

##### **Biology Option.**

See note under "Admission to Third Year Standing", page 16 of this calendar; "Attendance and Term Work" for third and fourth year students; also time allotted to each subject per week.

##### **MAJORS:**

1. **BOTANY.**—[3 "L" and 6 "Lab." fall term.]

[5 "L" and 6 "Lab." winter term.]

(a) **Systematic.**—Lectures and Laboratory work on the chief orders of flowering plants; including grasses and the identification of grass, clover, and other seeds. *A mounted collection of 100 plants and 50 specimens of weed seeds.* Texts: Gray's New Manual of Botany; Strasburger.

(b) **Structural and Histological.**—Lectures and laboratory work on the organs of the plant; mounting, examining and drawing vegetable cells and tissues. Strasburger; Chamberlain; Stevens' Plant Anatomy.

(c) **Physiological.**—An advanced seminary course. Strasburger; Green; Duggar; McDougall.

(d) **Fungi and Plant Pathology.**—(a) *Laboratory* course with occasional lectures in which are studied the injurious fungi affecting orchard, garden, greenhouse, and farm crops; (b) *a collection of 50 injurious fungi.* Texts: Reports and Bulletins; Fungous Diseases of Plants (Duggar); Diseases of Economic Plants (Stevens and Hall).

(e) **Cryptogamic.**—Laboratory study of the chief types covering the thallophytes, bryophytes and pteridophytes. Coulter, Barnes and Cowles, Vol. 1; Strasburger; Campbell; Masee, Text-book of Fungi.

Reading.—As assigned.

2. **ZOOLOGY.**—[2 "L" and 2 "Lab." fall term.]

[4 "L" and 4 "Lab." winter term.]

(a) **Invertebrate.**—A systematic study of the lower animals with reference to structure, function, development and relationship, the student using as types the amoeba, paramecium, vorticella, sponge (commercial and grantia), fresh water hydra, corals, campanularian hydroid, tapeworm, liver fluke, starfish, earthworm, crayfish, spider, grasshopper and mussel.

Text-books: McMurrich's "Invertebrate Morphology"; Parker and Haswell's "Invertebrate Zoology".

(b) **Vertebrate.**—This course is chiefly a study of comparative anatomy, the student using as types the amphioxus, fish, frog, snake, or turtle, pigeon, and cat or rabbit.

Text-books: Parker and Haswell's, Vol. II, "Vertebrate Zoology"; Kingsley's "Comparative Anatomy of Vegetables".

(c) **Economic.**—A laboratory and lecture course on the identification, habits and life histories of animals, giving special attention to Ontario forms.

Reading.—Bulletins and Reports of U. S. Department of Agriculture, and Ontario Fish and Game Association.

(d) **Vertebrate Histology.**—A laboratory course in the theory and use of the microscope and its accessories; the study of the animal cell, its multiplication and contents, and the normal histology of the various tissues and organs of vertebrates with particular reference to Mammalia.

Text-book: Hill's "Manual of Histology and Organography". Reference books: Piersol's "Normal Histology"; Stohr's "Text-book of Histology"; Clarkson's "Text-book of Histology".

(e) **Insect Histology, Physiology and Morphology.**—A laboratory and lecture course on the anatomy and physiology of insects with special reference to biological aspects. Methods and practice in the preparation of microscopical sections of insect tissue and in photomicrography.

Reading.—Folsom's Entomology with reference to Biological and Economic Aspects. Packard's Text-book of Entomology.

(f) **Physiology.**—The study of the functions of the different organs and parts. Lectures and demonstrations are given on the cell, blood, circulation, respiration, digestion and absorption, secretion and excretion, general metabolism and animal heat and force.

Text-book: "Howell's Text-book of Physiology". Reference book: Kirke's "Handbook of Physiology" (Nineteenth English edition).

### 3. ENTOMOLOGY.—[1 "L" and 2 "Lab." fall term.] [2 "L" and 2 "Lab." winter term.]

(a) **Systematic.**—A laboratory course in the identification and classification of insects. Where material and literature will permit this classification is carried through to genera and species. Each student is required to collect and mount at least 300 insects representing as many orders as possible. This collection the student should have as thoroughly classified as time will permit. Comstock's "Manual for the Study of Insects"; Blatchley's "Coleoptera of Indiana"; Williston's "North American Diptera", etc.

(b) **Economic.**—A careful study of injurious and beneficial insects with special attention to the most practicable and economical methods of control of the former; study of spray mixtures, spray outfits, and best methods of spraying. Each student is required to work out for himself the life histories of at least five different species of insects; take careful records of



all data obtained in so doing, and hand in these along with a concise type-written account of each life history. He must also hand in Riker mounts or other suitable cases containing the different stages of the insects reared. These will be retained by the Department. Sanderson's "Insect Pests of Farm, Garden and Orchard"; Chittenden's "Insects Injurious to Vegetables"; Saunders' "Insects Injurious to Fruits"; O'Kane's "Injurious Insects". Reports and Bulletins.

Reading.—As assigned.

4. **THESIS.**—As outlined on page 19.

#### MINORS:

1. **ENGLISH.**—As in the Agriculture Option.
2. **ECONOMICS.**—As in the Agriculture Option.
3. **FRENCH OR GERMAN.**—As in the Agriculture Option.
4. **BACTERIOLOGY.**—[4 "Lab." fall term.]

A laboratory course in the study of morphology and cultural characters of micro-organisms, and their relation to water supply, soil, dairy products, plant and animal diseases, and fermentation industries.

Reading.—As assigned.

5. **CHEMISTRY OF INSECTICIDES AND FUNGICIDES.**—

[2 "L".]

[4 "Lab."  $\frac{1}{2}$  winter term.]

### Fourth Year (for the B.S.A. Degree).

#### Chemistry and Physics Option.

See note under "Admission to Third Year Standing", page 16 of this calendar; "Attendance and Term Work" for third and fourth year students, page 16; also time allotted to each subject per week.

#### MAJORS:

1. **CHEMISTRY.**—[6 "L" and 8 "Lab." fall term.]

[8 "L" and 8 "Lab." winter term.]

(a) **Inorganic Chemistry.**—Advanced course (Newth).

(b) **Soil Chemistry.**—Atmosphere, soils, reactions occurring in soils, fertilizers, the plant, its characteristics and relation to soil and atmosphere. Storer, Ingle, Hall.

(c) **Organic Chemistry.**—Lectures and preparation of organic compounds. Organic Chemistry (Cohen).

(d) **Animal Chemistry.**—Foods, their composition and digestibility; food constituents and their function; physiological value of the nutrients; selecting and compounding of rations. Armsby, Jordan, Ingle, Wolff, Kellner.



(e) **Chemistry of Insecticides and Fungicides.**—Short course dealing with the Chemistry and the preparation of the principal insecticides and fungicides.

(f) **Chemistry of Fruits, Vegetables and Fermentations.**

*Laboratory Work:*

1. **Qualitative Analysis.** Text-book: *Qualitative Chemical Analysis* (Jones).

2. **Volumetric Analysis.** Text-book: (Coblentz).

3. **Polariscope and Sugar Determinations.**

4. **Analysis.** Of water, soil, fertilizers, fodders, etc.

5. **Preparation of Organic Compounds.**

Reading.—As assigned.

2. **PHYSICS.**—[4 "L" and 4 "Lab." fall and winter terms.]

(a) **Climatology.**—A general study of conditions that influence climate; particular study of Canadian climate, climatic factors in relation to agriculture; climate limits in Canada for the agricultural and horticultural products. Text: Hann's *Climatology*.

(b) **Soil Physics.**—Movements of air and water in the soil; soil temperatures; conditions affecting tilth; analysis and microscopic examinations of types. Text: Warrington's *Physical Properties of the Soil*. Reference: King's *Physics of Agriculture*.

(c) **Tillage and Drainage.**—Spring and autumn tillage; relation of various implements to air, moisture, warmth and tilth of soil; management of different types of soil; principles of drainage; preliminary surveys; systems of drainage; preparing plans for drainage; principles and methods of irrigation. Text: *Engineering for Land Drainage* (Elliott).

(d) **Logarithms and Thermodynamics.**—Texts: Hall and Knight's *Higher Algebra*; Maxwell's *Theory of Heat*.

(e) **Electricity.**—Telephones, principles, installation and care; telegraphy, metallic circuit and wireless; generators, direct and alternating; transmission of electricity; motors, direct and alternating; electric lighting; wiring; installation of plants for farm use.

(f) **Light and Sound.**—Edser, "Light for Students"; Thomson and Poynting, "Sound".

3. **THESIS.**—As outlined on page 19.

**MINORS:**

1. **ENGLISH.**—As in the Agriculture Option.

2. **ECONOMICS.**—As in the Agriculture Option.

3. **GERMAN.**—As in the Agriculture Option.

4. **FIELD HUSBANDRY.**—[2 "L" fall and winter terms.] As outlined in Section 2: Major portion of Agriculture Option.

**Fourth Year (for the B.S.A. Degree).****Dairy Option.**

See note under "Admission to Third Year Standing", page 16 of this calendar; "Attendance and Term Work" for third and fourth year students; also time allotted to each subject per week.

**MAJORS:**

1. DAIRY HUSBANDRY.—[5 "L" and 6 "Lab." fall term.]

[7 "L" and 6 "Lab." winter term.]

(a) Farm Dairy work and milk-testing, theory, practice and lectures, with "The Book of the Dairy" (Fleischmann).

(b) Lectures, in the winter term, with "Principles and Practice of Butter-making" (McKay and Larsen); "Testing Milk and its Products" (Farrington and Woll); "Science and Practice of Cheese-making", Part III. (Vanslyke and Publow).

(c) Laboratory course of experiments in cheese-making, butter-making, cream separators and milk-testing, relating to the latest practices in dairy operations. Time amounting to two days a week, throughout the year, one being Saturday, will be devoted to this experimental work.

Reading.—As assigned.

2. BACTERIOLOGY.—[2 "L" fall term.]

[1 "L" and 6 "Lab." winter term.]

Dairy bacteriology, and such general bacteriology as is necessary for a thorough understanding of the work of dairying.

Reading.—As assigned.

3. CHEMISTRY.—[2 "L" and 5 "Lab." fall term.]

(a) Dairy Chemistry.—(a) A chemical study of milk, butter, cheese, and the by-products of the dairy; (b) Laboratory work, analysis of the products of the dairy, preservatives, adulterants, water and colouring material (Richmond).

(b) Animal Chemistry.—As outlined in the Chemistry and Physics Option, Section 1, Part D.

Reading.—As assigned.

4. THESIS.—As outlined on page 19.

**MINORS:**

1. ENGLISH.—As in the Agriculture Option.

2. ECONOMICS.—As in the Agriculture Option.

3. GERMAN.—As in the Agriculture Option.

4. SOIL CHEMISTRY.—[3 "L" fall term.] As outlined in the Chemistry and Physics Option, Section 1, Part B.

5. FIELD HUSBANDRY.—[2 "L" fall term.] Advanced course in field crops, emphasizing hay, pasture and fodder crops. Lectures and laboratory work.

**Fourth Year (for the B.S.A. Degree).**

**Horticulture Option.**

See note under "Admission to Third Year Standing", page 16 of this calendar; "Attendance and Term Work" for third and fourth year students; also time allotted to each subject per week.

**MAJORS:**

1. HORTICULTURE.—[6 "L" and 3 "Lab." fall term.]  
[8 "L" and 2 "Lab." winter term.]

**(a) POMOLOGY.**

*Lectures.*—The theory and Practice of nursery work and fruit growing; Cost of Production; Systems of Selling; Systematic Classification of Canadian Fruits and Identification of Varieties.

*Text-books:* Systematic Pomology (Waugh); Apples of New York (Beach); Grapes of New York (Hedrick); Principles of Fruit Growing (Bailey); Pruning Book (Bailey); Nursery Book (Bailey); Bush Fruits (Card); Popular Fruit Growing (Green); Fruit Growing in Arid Regions (Paddock and Whipple); Fruit Harvesting, Storing and Marketing (Waugh).

*Practical Work.*—Stratification and planting of seeds and pits; budding, root and cleft grafting; making cuttings; pruning and spraying; picking, grading, packing; selection of fruit for exhibition purposes; judging; studies of varieties and commercial packages at exhibitions.

**(b) VEGETABLE GARDENING.**

*Lectures.*—Theory and practice of truck gardening under glass and out-doors; greenhouse construction and management. Canning factory crops and methods of canning; seed growing; spraying, fumigating, etc.

*Practical Work.*—Selection and testing of seeds; preparation of vegetables for exhibition and market; judging; greenhouse management.

**(c) FLORICULTURE.**

*Lectures.*—Theory and practice of commercial plant and flower production; cutting, storing and shipping flowers; handling decorative and bedding plants.

*Practical Work.*—Propagation and culture of special florists' crops; greenhouse management; making and planting flower beds and borders; visits to leading commercial establishments.

**(d) LANDSCAPE GARDENING.**

*Lectures.*—History and development; principles underlying rural and civic improvement; planning public and private grounds, etc.

*Practical Work.*—Study of landscape materials; preparation of plans.

**(e) PLANT BREEDING.**

*Lectures.*—Studies of theory and practice of plant improvement with special reference to fruits, flowers and vegetables.

*Reading.*—As assigned.

## 2. BIOLOGY.—[4 "Lab." fall and winter terms.]

(a) Plant Pathology.—Identification and classification of fungous diseases affecting orchard, garden and greenhouse crops, prevention and remedies. A collection of 50 injurious fungi required. Texts: Fungous Diseases of Plants (Duggar), or Diseases of Economic Plants (Stevens and Hall).

(b) Economic Entomology.—Special study of injurious and beneficial insects, especially those affecting fruit, vegetables and green-house crops. Study of mouth parts, ovipositors and external anatomy; life histories and treatment; spray mixtures and methods of spraying. Each student is required to collect specimens of at least 40 of the injurious insects studied, to mount these neatly and place labels on them with the name and the date and the place of capture. The student is also required to work out for himself the complete life history of at least two species of insects, to preserve the different stages in some suitable case, such as a Riker mount, and hand these into the Department along with an orderly and concise typewritten record of the life history. Such mounts and records will be retained by the Department.

(c) Plant Histology and Physiology.—An advanced seminary course dealing particularly with the histology and physiology of horticultural crops. Texts: Duggar's Plant Physiology; Vegetable Physiology (Green).

## 3. CHEMISTRY.

(a) Chemistry of Insecticides and Fungicides.—[2 "L" and 4 "Lab."  $\frac{1}{2}$  winter term.]

(b) Chemistry of Fruits, Vegetables and Fermentations.—[2 "L" and 4 "Lab."  $\frac{1}{2}$  winter term.]

Reading.—As assigned.

## 4. THESIS.—As outlined on page 19.

### MINORS:

#### 1. SYSTEMATIC BOTANY.—[1 "Lab." fall and winter terms.]

Lectures and laboratory work on the chief orders of flowering plants, with special references to cultivated forms. *A mounted collection to be made of 100 cultivated plants.* Text-book: Field, Forest and Garden Botany (Gray), with Leavitt's Outlines.

#### 2. PHYSICS.—[2 "L" fall and winter.]

*Climatology* as under Physics, Section A, in the Chemistry and Physics Option.

#### 3. BACTERIOLOGY.—[2 "Lab." fall term.]

A laboratory course with supplemental lectures in fall term on bacterial diseases of plants, bacteria as related to the canning industry, bacteriological analysis of soils, etc.



4. SOIL CHEMISTRY.—[3 "L" and 2 "Lab." fall term.]—as under Chemistry, Part 1, Section B, in the Chemistry and Physics Option.
5. ENGLISH.—As in the Agriculture Option.
6. ECONOMICS.—As in the Agriculture Option.
7. GERMAN.—As in the Agriculture Option.
8. POULTRY.—As in the Agriculture Option.

### **Degree of B.Sc. (Agr.) and Specialists' Certificates in Science and Agriculture.**

#### **COURSES AND EXAMINATIONS.**

Under the present scheme for the advancement of Agricultural Education in Ontario, the County Representative of the Department of Agriculture is expected to teach Agriculture in the High and Continuation Schools and Collegiate Institutes. The latter function, however, he is usually unable to perform satisfactorily, partly owing to the pressure and importance of his duties as representative, and partly to the difficulties connected with arranging for his classes in the time-tables of the Schools. The experience of five years has shown that in order to secure for the subject of agriculture its due share of attention, the teacher of agriculture must be a regular member of the staff. For some years at any rate, not all the time of such teacher would be taken up with classes in agriculture, and, accordingly, at the request of the Minister of Education, the Universities of Toronto, Queen's and McMaster established the new degree of Bachelor of Science in Agriculture [B.Sc. (Agr.)] in 1912, the course for which covers four years, the first two being taken at the Universities and the last two at the Ontario Agricultural College, Guelph. These courses provide a good general education as well as a special knowledge of both science and agriculture. In order, also, to increase their knowledge of practical agriculture, candidates for the degree will be expected to work during the summer vacation between the third and fourth year's course, either on the College farm or on some other farm in the Province of Ontario which, in the opinion of the President of the College, is well managed. The conditions under which this work is to be done may be ascertained from the President.

The degree B.Sc. (Agr.), the Department of Education will accept as the academic qualification for a Specialist's Certificate in both Science and Agriculture, and for a Public School Inspector's Certificate. The Specialist's Certificate will be granted after a year's professional training at either of the Faculties of Education, and the holder will be qualified to teach both Science and Agriculture in a High or Continuation School or a Collegiate Institute. Under this new scheme, the County Representative will continue to discharge his duties as such, and will, in addition, conduct, under the School Board concerned, classes for farmers and farmers' sons throughout the county, while the duties of the holder of the new Specialist's Certificate will be confined to the regular Secondary School Classes.



With a view to furthering the success of this scheme and thereby improving the agricultural teaching in the schools, the Government will give, at the end of each of the two years taken at the Agricultural College, a scholarship of \$100.00 to each candidate for the degree, who passes the final examinations of the year and is recommended therefor by the President of the College. Moreover, as soon as the new class of specialists is available, the Government will make liberal grants for the encouragement of Secondary School Classes in Agriculture, in the form of contributions to their maintenance and of additions to the teacher's salary. The aforesaid payments to teachers will, however, carry with them an obligation on the teacher's part to teach for at least two years in the Province of Ontario; but, as in the case of similar grants made by the Department of Education, the return of a proportionate amount of the total will release the teacher from this obligation.

### **Curriculum for the Degree of B.Sc. (Agr.)**

#### **First and Second Years.**

See calendar of University of Toronto, Toronto, Ont.; Queen's University, Kingston, Ont.; McMaster University, Toronto, Ont. Calendars will be mailed upon application to these Institutions.

#### **At the Ontario Agricultural College, Guelph.**

The following are accepted by the Universities of Toronto, Queen's, and McMaster as the third and fourth year courses for the degree of B.Sc.(Agr.):

##### **THIRD YEAR—**

English; Modern History; Rural Economics; Horticulture; Beekeeping; Animal Husbandry; Dairy Husbandry; Field Husbandry; Poultry Husbandry; \*Botany; \*Entomology; \*Chemistry—Qualitative Analysis; \*Physics—Cold Storage and Meteorology.

##### **FOURTH YEAR—**

English; Modern History; Rural Economics; Forestry; Horticulture; Field Husbandry; Animal Husbandry; \*Botany; \*Zoology; \*Entomology; \*Bacteriology; \*Chemistry.

### **Regulations.**

#### **Acceptance of Courses.**

The Universities accept the examination results of the third and fourth years of the courses prescribed herein in the Ontario Agricultural College.

\*Honour Science Subjects.

**Standards.**

A candidate for the degree of B.Sc. (Agr.) from any of the Universities of Toronto, Queen's and McMaster, shall attain the following standard at the examinations at the Universities and the Agricultural College:—

1. A minimum average of 60 per cent. in the papers in Science of the first and second years, respectively, of the University courses.

2. A minimum average of 60 per cent. in the papers of the third year in the Agricultural College in the following subjects of the course:—Botany, Entomology, Chemistry; Qualitative Analysis and Physics; Cold Storage and Meteorology.

3. A minimum average of 66 per cent. in the papers of the fourth year at the Agricultural College, in the following subjects of the course:—Botany, Zoology, Entomology, Bacteriology and Chemistry.

4. A minimum of 40 per cent. in the papers in the other subjects of each year of the prescribed course in the Universities and the Agricultural College.

(For further information write the Deputy Minister of Education, Toronto, and the President of the Ontario Agricultural College, Guelph.

**CURRICULUM FOR DIPLOMA IN PHYSICAL TRAINING.**

A diploma will be granted to students of the University who shall have completed to the satisfaction of the Senate the following courses for teachers of Physical Training:—

I. A Theoretical course embracing Anatomy, Physiology, Hygiene, Corrective Work, Anthropometrical Measurements and the detection of defects and deficiencies.

II. A practical course, as follows:—

**For Men.**

1. (a) Horizontal bar.  
(b) Parallel bars.  
(c) Vaulting horse.  
(d) Ladder.  
(e) Buck.  
(f) Mats.  
(g) Chest Weights.  
(h) Corrective apparatus.
2. Indoor games.
3. Military drill.
4. Dumb-bells, wands, bar-bells, freehand exercise.
5. Fencing and singlestick.
6. Boxing and wrestling.

Of these 1, 2, 3 and 4 are compulsory, together with either 5 or 6.

**For Women.**

1. Lectures to extend over four years, one hour a week through each college year.

First year: Hygiene and Sanitation, Anatomy and Physiology.

Second year: Applied Anatomy, Physiology of Exercise and Psychology of Exercise.

Third year: Anthropometry, History of Physical Education, Remedial Gymnastics.

Fourth year: Pedagogy and Social Service.

2. Practical Exercises, three periods each week for four years including:—  
Swedish exercises, perpendicular rings, travelling rings, elementary fencing, relaxing exercises, breathing and voice culture, indian clubs, dumb-bells, wands, aesthetic gymnastics, folk dances and games, light work on apparatus, swimming.

III. An examination will be required in elementary anatomy, physiology, corrective work, body-building and hygiene.

IV. All candidates for the diploma shall present certificates of having completed a minimum course of two years of attendance and instruction in the subjects of examination. Such course of instruction shall be taken in the Gymnasium of the University of Toronto, but courses of instruction elsewhere may, by special permission of the Senate, be accepted *pro tanto*.

V. The fee for examination shall be \$5.00 ,and for the diploma \$2.00.

### CURRICULUM IN VETERINARY SCIENCE.

There is hereby established a course of four years' study leading to the degree of Bachelor of Veterinary Science (B.V.Sc.), the details of which will be announced in a subsequent issue of this calendar. A student who registers in the Ontario Veterinary College in the session 1914-1915 for his first year will come under the regulations of the new four-year course.

The following regulations respecting the degree of Bachelor of Veterinary Science apply to those students who registered in the Ontario Veterinary College prior to the first of November 1913.

There is hereby established a course of three years' study leading to the degree of Bachelor of Veterinary Science.

The subjects of the entrance examination to this course shall be as follows:

English, History and Arithmetic of Junior Matriculation; together with any one of the following: French, German, Latin, or any two of the following: Chemistry, Physics, Geometry, Algebra.

This entrance examination must be completed before entering upon the third year's course at the Ontario Veterinary College.

Students for the degree of Bachelor of Veterinary Science must complete the third year's course of studies and be enrolled at the Ontario Veterinary College; and, prior to taking this third year's course, must have completed, both as to attendance and passing of examinations, the two-year's course at the Ontario Veterinary College or at some other Veterinary College that is recognized by the said Ontario Veterinary College as qualifying them for admission to the third year's course at the Ontario Veterinary College, and must have practised with a qualified veterinarian for a period of at least five months.

The subjects of examination in the third year's course shall be as follows:

Veterinary Surgery;	Veterinary Hygiene;
Sporadic Diseases of Horses and their treatment;	Dairy Inspection;
Contagious Diseases of Animals;	Pathology;
Sporadic Diseases of Cattle;	Bacteriology;
Canine and Feline Diseases;	Veterinary Jurisprudence;
Meat Inspection;	Materia Medica;
Milk Inspection;	Foods and Breeding;
Veterinary Obstetrics;	Breeds and Breeding;
	Stock Judging;

Veterinary Dentistry.

The examinations in the above subjects shall be conducted by Examiners appointed by and under regulations approved by the Senate of the University.



The standard of passing shall be fifty per cent. in each subject with an average of sixty per cent. of the total number of marks assigned to the subject.

The first class Honour standard is seventy-five per cent. and the second class sixty per cent.

Any student failing in not more than four of the above subjects may take supplementary examinations in these subjects, and upon passing the same shall be entitled to receive the degree.

Upon the successful passing of the examinations in the above subjects, the students shall be entitled to receive the degree of Bachelor of Veterinary Science, B.V.Sc.

### **Doctor of Veterinary Science.**

A graduate holding the degree of Bachelor of Veterinary Science, desiring to proceed to the degree of Doctor of Veterinary Science, shall by the first of January apply to the Senate for permission to undertake special research in a scientific laboratory or in some designated field of work allied to the live stock industry, and upon permission being obtained he shall carry on special research and present a thesis on or before the first of May, and upon the said thesis being approved by the Senate, the degree of Doctor of Veterinary Science shall be conferred upon the said graduate, but only after the expiration of twelve months from the time of conferring the degree of Bachelor of Veterinary Science.

### **Fees.**

The fee for the degree of B.V.Sc. shall be \$10, which shall be paid before writing on the final examination for the said degree; and the fee for the degree of D.V.Sc. shall be \$15, which shall be paid on presentation of the thesis for the said degree



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**CURRICULA IN MUSIC.**

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### **CURRICULUM FOR LOCAL EXAMINATIONS IN MUSIC.**

The University of Toronto Local Examinations in Music are held annually at specially announced dates between the 1st of June and 15th of July, and in December. The examinations in theory will be held in the first week in June, and in December, 1915.

The Local Examinations in practical branches for Toronto will be held at the University on June 8th, 9th, 10th, 11th and 12th, 1915.

The December Local Examinations in the practical branches will be held in Toronto, and at the discretion of the Senate may be held at other places. Applications for the December examinations must be forwarded to the Registrar of the University not later than the first of November.

The Local Examinations include the Elementary Grade in piano, the Primary, Junior and Intermediate grades in the practical branches (piano, organ, voice, violin and violoncello), and the Junior, Intermediate and Senior grades in the Theory of Music.

As necessity arises examinations will be announced in other practical branches.

Various local centres, each under the charge of a local representative, have been established in the different parts of the Dominion. Five candidates in one department are necessary to constitute a local centre.

Applications for local examinations must be forwarded to the Registrar of the University not later than May 9th, 1915. The fees for examination and certificate must, in all cases, accompany the candidate's application for examination. The fee for certificate will be returned to unsuccessful candidates.

The names and addresses of candidates should be written on the proper form of application which may be obtained through the local representatives, or upon application to the Registrar of the University.

A list of the successful candidates will be published in the Toronto papers as soon as possible after the examiners have completed their duties.

Candidates in practical subjects are informed that when any particular edition is named, for the purpose of identifying compositions, the use of such edition is not compulsory. The examiners will accept any edition, but candidates are particularly cautioned against presenting wrong pieces, as errors in this respect will invariably result to the disadvantage of the candidate.

The total number of marks necessary to pass in any subject is 60; second class honours, 70; for first class honours, 80; maximum, 100.

In the Intermediate and Senior grades in the Theory of Music, the candidate must obtain 60 per cent. of the marks assigned to Harmony in order to pass.

Candidates in the practical subjects may, if desired, pass at once to any higher examination in the series without first passing the lower grades.

There is no appeal whatever from the decision of the Examiner or Examiners.



Local Centres.	ONTARIO.	Representatives.
Alexandria .....		Donald MacKay, B.A.
Almonte .....		J. W. Treleaven, B.A.
Amherstburg .....		Rev. Thomas Nattress, B.A.
Arnprior .....		A. E. Morrow, B.A.
Aylmer .....		W. W. Rutherford, B.A.
Barrie .....		Judge Boys, LL.B.
Belleville .....		Col. W. N. Ponton, M.A.
Berlin .....		
Bobcaygeon .....		
Bowmanville .....		
Brampton .....		W. J. Fenton, B.A.
Brantford .....		
Brockville .....		A. J. Husband, B.A.
Burk's Falls .....		A. W. Partridge, M.B.
Caledonia .....		
Cayuga .....		J. E. Skeele, B.A.
Chatham .....		
Clinton .....		
Cobourg .....		J. W. Odell, B.A.
Collingwood .....		W. Williams, B.A.
Cornwall .....		
Deseronto .....		W. K. T. Smellie, B.A.
Dundas .....		John Reid, M.A., LL.B.
Fergus .....		
Fort William .....		T. S. T. Smellie, M.A., M.D.
Galt .....		T. Carscadden, M.A.
Gananoque .....		H. W. Irwin, B.A.
Georgetown .....		R. Coutts, B.A.
Goderich .....		H. I. Strang, B.A.
Gravenhurst .....		
Grimsby .....		W. Montgomery, B.A.
Guelph .....		W. Tytler, B.A.
Hamilton .....		W. H. Ballard, B.A.
Hespeler .....		A. Ochs, M.B.
Ingersoll .....		J. L. Paterson, B.A., LL.B.
Kemptville .....		W. Dillane, B.A.
Kenora .....		
Kincardine .....		S. W. Perry, B.A.
Kingston .....		
Lakefield .....		W. A. Baker, M.D.

Local Centres.	ONTARIO.	Representatives.
Lindsay.....		
Listowel.....		W. A. Phillips, B.A.
London.....		S. J. Radcliffe, B.A.
Madoc.....		
Meaford.....		L. J. Cornwell, B.A.
Midland.....		F. C. Macdonald, B.A., M.B.
Morrisburg.....		Adam Johnston, B.A., LL.B.
Mount Forest.....		
Napanee.....		Rev. A. L. Howard, Ph.D.
Niagara Falls.....		
North Bay.....		
Orangeville.....		A. Steele, B.A.
Orillia.....		J. E. Dickson, B.A.
Ottawa.....		J. Macmillan, B.A.
Owen Sound.....		T. Murray, B.A.
Palmerston.....		
Paris.....		W. N. Bell, B.A.
Parry Sound.....		J. R. Stone, B.A., M.B.
Pembroke.....		P. White, B.A., LL.B.
Perth.....		W. Hardy, B.A.
Peterborough.....		E. B. Edwards, M.A., LL.B.
Petrolea.....		J. J. Bell, B.A.
Picton.....		M. Currie, B.A., M.B.
Port Arthur.....		F. H. Keefer, M.A., LL.B.
Port Elgin.....		F. H. Wells, M.B.
Port Hope.....		
Prescott.....		R. C. Rose, B.A.
Ridgetown.....		J. G. Little, B.A.
Sarnia.....		
Sault Ste. Marie.....		L. A. Green, B.A.
Seaforth.....		
Smith's Falls.....		S. J. Stubbs, B.A.
Stratford.....		C. A. Mayberry, B.A., LL.B.
Strathroy.....		C. S. Kerr, B.A.
Sudbury.....		J. H. Clary, B.A.
St. Catharines.....		W. J. Robertson, B.A.
St. Thomas.....		W. H. Murch, Esq.
Thorold.....		
Tillsonburg.....		V. A. Sinclair, B.A., LL.B.
Uxbridge.....		H. G. Park, B.A., D.Paed.
Vankleek Hill.....		Rev. L. Conley.
Walkerton.....		A. E. McNab, B.A.
Waterloo.....		Rev. J. R. Gilchrist, B.A.
Welland.....		J. McNiece, B.A.

### Local Centres.

## ONTARIO.

## Representatives

Whitby.....	W. O. Eastwood, B.A., M.D.
Windsor.....	Rev. J. C. Tolmie, B.A.
Woodstock.....	Rev. R. B. Cochrane, M.A.

**BRITISH COLUMBIA.**

New Westminster.....A. E. White, Esq.  
Victoria.....Mrs. Alfred Watt, B.A.  
Vancouver.....

## MANITOBA.

Brandon.....Miss G. E. Fraser  
Winnipeg.....N. B. MacLean, M.A.

**ALBERTA.**

Calgary.....Rev. J. A. Clark, B.A.  
Edmonton.....Rev. D. G. McQueen, B.A.

## SASKATCHEWAN.

**Regina.....D. P. McColl, B.A.**

### THEORY OF MUSIC.

The Theory Examinations are conducted in three grades:—Junior, Intermediate and Senior. The Board of Studies have decided not to name any text-books on Harmony and Counterpoint. Intelligible answers will be accepted by the Examiners, regardless of any particular system or theory.

Three hours will be allowed for each paper.

For particulars as to fees, see page 605.

The Junior division paper will embrace questions on notes and rests; key-signatures and time-signatures; intervals and their inversions; treble and bass clefs; major, minor and chromatic scales; meanings of terms and signs in ordinary use; transposition from one key to another, and from treble to bass, or vice versa. No part-writing will be required, but questions will be asked on the construction of the common chord, and the chord of the dominant seventh; and on the inversion of these chords.

The Intermediate division paper will include questions, embracing the subject-matter of the requirements for the Junior division; on transposition into various keys and clefs (including the C clef); intervals and their inversions; triads and their inversions; the dominant and diminished sevenths, and their inversions and resolutions; preparation and resolution of suspensions (including retardations); transcription from short score to open vocal score; the harmonization of a figured bass; cadences; sequences; simple modulation; well-known facts on musical history within the period of 1750-1850.

The Senior division paper will embrace questions on triads (consonant and dissonant); discords of the seventh and ninth (chromatic and diatonic); suspensions; passing discord; the augmented sixth; inversions of all the before-mentioned chords; adding three parts above a figured bass; harmonizing a given melody, or an unfigured bass, in three or four parts; adding one part in the first species of counterpoint to a given canto fermo; adding one part in the second, third, fourth, or fifth species of counterpoint to a given canto fermo; elementary form, including the musical sentence and forms employed in the Sonata; modulation; musical history from 1600 to 1850.

In the Intermediate and Senior grades in the Theory of Music, the candidate must obtain 60 per cent, of the marks assigned to Harmony in order to pass.

The certificate for the Senior division in Theory will not be issued unless the candidate has passed the examination of the Junior division.

The examination in Theory of the first year Bachelor of Music of the University of Toronto will be accepted for any of the Theory of the Local Examinations.

**PIANOFORTE.****Elementary Grade.**

Candidates will be required to prepare six numbers in all, chosen from the following list of compositions.—

**Elementary Piano.**

**ALDEN, J. C.**  
The Sandman.

**ALETTER, W.**  
Hunting March.

**BARTH, OTTO**  
In My Garden, op. 15: No. 1, Morning  
Glory; No. 2, A Romp on the  
Grass; No. 4, The First Butterfly;  
No. 5, All Abloom; No. 6, Red  
Roses; No. 7, Under the Trees;  
No. 8, March of the Shadows;  
No. 10, In the Moonlight.

**BAUMFELDER, F.**  
Peasant Dance.

**BEETHOVEN, L. VAN**  
Menuet in G.

**BELLAIRS, R. H.**  
Six Melodious Pieces: No. 1, The  
Watersprite; No. 2, The Hunter's  
Horn; No. 3, The Fairy Ring;  
No. 4, Day Dreams; No. 5, Moon-  
light; No. 6, The Windmill.

**BERWALD, W.**  
Valse Coquette.  
Hunting Song.

**BOHM, C.**  
Invitation, op. 362, No. 2.

**BROWN, ARTHUR L.**  
Musical Scenes from Pixie Land, op.  
16: No. 1, The Pixies' Drill; No. 6,  
The Pixies' Waltzing; No. 10,  
The Pixies Asleep.  
The Pixies' Carnival, op. 32: No. 1,  
The Pixies' Waltz Song; No. 2,  
The Pixies' Prize Song; No. 9,  
The Pixies' Gavotte; No. 10, The  
Pixies' Good-Night Song.

**BROWN, F. K. SARGENT.**  
Catch me if you can, op. 12, No. 3.  
Over Hill, over Dale, op. 12, No. 5.  
A Dance in Fairy Glen, op. 12, No. 6.  
A quiet Talk, op. 12, No. 4.  
Weaving Garlands, op. 12, No. 7.  
Good Night, Fairies all, op. 12, No. 8.

**CADMAN, C. W.**  
Dance of the Sunbeams, op. 34, No. 8.  
A Day Dream, op. 35, No. 5.  
A Country Vacation, op. 37: No. 1,  
Churning Song; No. 3, The  
Thresher; No. 4, Noontide Rest;  
No. 5, Playing in the Hay.

**CHADWICK, G. W.**  
Ten Little Tunes: No. 5, The Little  
School Bell.

**CONRAD, WM.**  
Holiday Series: No. 1, May Day  
Frolics; No. 2, Hallowe'en Revels;  
No. 3, New Year's Greetings;  
No. 4, Chimes on Christmas  
Morn; No. 5, St. Patrick's Day  
Pranks.

**CRAMM, H. L.**  
Rut-a-tut-tuts, op. 7, No. 6.  
Pittypat and Tippytoe, op. 7, No. 7.  
Left Foot, Right Foot, op. 12, No. 1.  
The Gossips, op. 16, No. 1.  
The Rowing Song, op. 16, No. 2.  
A Morning Gallop, op. 16, No. 3.

**CUI, C.**  
A la Schumann, op. 20, No. 4.

**DEVAUX, J.**  
The Queen of the Ball, op. 21, No. 6.  
Dream Pictures, op. 23: No. 1, Antoin-  
ette.

**DORN, C.**  
In the Park.

**DUCELLE, PAUL**  
Musical Memories, op. 16: No. 1,  
Dancing Stars; No. 2, Lilliputian  
Parade; No. 3, Little Gazelle;  
No. 4, Dance of the Dewdrops;  
No. 5, Souvenir Valse; No. 7,  
Nita; No. 8, The Sleighride;  
No. 9, Maybells; No. 10, Hand in  
Hand; No. 12, Queen of Drowsy-  
Land.  
Alpine Song, op. 27, No. 3.  
March of the Guards, op. 20, No. 7.

**DUTTON, THEODORA.**  
Five Little Stories in Tone, op. 8:  
No. 1, Rowing Song; No. 2, May  
Day March; No. 3, The Swaying  
Bough; No. 4, Little Soldiers.



- EIKHARDT, RUDOLF**  
Melodious Sketches, op. 15: No. 4, The Merry Lark; No. 7, The Greeting; No. 9, Golden Locks; No. 10, Youth's Happy Day; No. 12, The Forest King.
- EILENBERG, R**  
Characteristic Dances, op. 26: No. 1, Dance of the Clowns; No. 3, Dance of the Flower Girls; No. 4, Dance of the Hunters.  
Ten Tone Pictures, op. 19: No. 1, Hide and Seek; No. 2, Merry-Go-Round; No. 3, Merry Kate; No. 6, Hazel's Dance.  
Six Silhouettes, op. 23: No. 1, Pleasant Memories.  
Ten Recreations, op. 25: No. 4, Serenade.  
Humoreske, op. 27, No. 5.
- ENGELMANN, H.**  
Nocturne, op. 562, No. 3.
- FARRAR, F. E.**  
A June Morning.  
The Trumpet Calls.  
In the Sunlight.
- GAEL, H. VAN.**  
The Whirlwind.
- GRANT-SCHAEFER, G. A.**  
On the Water.
- GURLITT, CORNELIUS.**  
Petite Valse in A flat, op. 62, No. 11.
- HELLER, STEPHEN.**  
L'Avalanche, op. 42, No. 2.
- KERN, C. W.**  
Flowers of the Valley, op. 41: No. 3, Bluebells; No. 4, Feather Roses; No. 5, Lady's Slipper; No. 6, Jack-in-the-Pulpit.
- KNAEBEL, A. M.**  
Two Little Fairies, op. 20, No. 3.
- KROGMANN, C. W.**  
Five Note Fancies, op. 78: No. 4, Bandit March; No. 5, Cradle Song; No. 6, The Water Wheel; No. 7, The Little Regiment; No. 8, Gipsy Dance; No. 9, Rondolette; No. 10, Forest Breezes.  
Ten Musical Bon Bons, op. 10: No. 2, Barcarolle; No. 8, In Slumberland; No. 9, Christmas Dance; No. 11, Grazulla Menuet.  
A Wreath of Melody, op. 35: No. 11, The Skating Carnival.  
Revels in Tone Land, op. 45: No. 5, Fairy Whispers; No. 8, Angels' Lullaby; No. 11, Rustic Festival.
- KUESSNER, A.**  
When Daisies Sleep, op. 11.
- LAER, C. E. VAN**  
The Chase.
- LEE, C. R.**  
Tarantella in G.
- LENACKE, MAX**  
Happy Maytime, op. 19, No. 2.  
Springtime Dance, op. 19, No. 4.
- MARTIN, GEORGE DUDLEY**  
At the Fountain.
- McINTYRE, E. V.**  
The Cello Player, op. 12, No. 5.
- NICKERSON, F. A.**  
Arbutus Waltz.
- OEHMLER, LEO**  
Clown Parade, op. 175, No. 1.  
Hare and the Tortoise Race, op. 178.  
Sleep, Darling, Sleep.
- OESTEN, T.**  
Doll's Dream, op. 202, No. 4.
- ORTH, L. E.**  
In the Hammock, op. 2, No. 1.  
The Merry-Go-Round, op. 6, Book I: Nos. 1, 2, 3, 4, 5, 7, 9; any two.
- OTTO, E.**  
Wn rling.
- PENNINGTON, L. B.**  
Village Dance, op. 10, No. 1.  
Gipsy Dance, op. 10, No. 3.
- POLDINI, E.**  
Zwölf Kleine Fantasiestücke, op. 11: No. 1, Hanswurst; No. 4, Schmetterling.  
Divertissements: No. 1, Valse des Sourceaux.
- QUIGLEY, L. G.**  
Swaying Ferns, op. 121, No. 5.
- REGER, CARL**  
Barcarolle, op. 15, No. 2.  
Marsch in C, op. 15, No. 10.  
Marsch in F, op. 19, No. 10.  
10 Little Leaves, op. 19: No. 2, Pastoral; No. 3, Minuet.
- REINECKE, CARL**  
Mazurka in A minor.
- ROHDE, E.**  
Stray Leaves, Book I: No. 6, First Violets.
- SABATHIL, F.**  
A Merry Dance, op. 234, No. 4.
- SARTORIO, A.**  
Six Recreations, op. 34: No. 2, Happy Outing.  
Six Recreations, op. 269: No. 2, The Happy Hunter; No. 5, Little Flyaway.  
Six Melodious Recreations, op. 274: No. 2, Country Dance; No. 3, In the Twilight; No. 4, Happy Youth.  
A Little Story, op. 452, No. 9.  
Twelve Flower Pieces, op. 721; No. 9 Snowdrop.
- SCHOTTE, LUDWIG**  
The Postillon.
- SCHMITT, SUSAN**  
Very Happy.  
Alla Turca.

**SJOEGREN, E.**  
Elegie, op. 41, No. 1.

**SPINDLER, FRITZ**  
The Chase, op. 123, No. 7.  
Cossacks' Dance, op. 249, No. 7.

**SPAULDING, GEORGE**  
Seven Easy Pieces: No. 1, Base Ball;  
No. 3, My Fair Lady; No. 6,  
Young Braves; No. 7, Young  
Shepherdess.

**STOUGHTON, R. S.**  
Hide and Seek.  
On the Lake.

**TELLIER, A.**  
An Autumn Dream.  
An Autumn Legend.  
Ten Little Pieces, op. 14: No. 1, An  
Evening Story; No. 3, The En-  
chantress; No. 7, Return of the  
Reapers; No. 8, From Flower to  
Flower; No. 9, Francesca.

**THOMPSON, R. G.**  
Once upon a Time, op. 2, No. 3.

**TSCHAIKOWSKY, P. I.**  
Maman, op. 39, No. 4.  
Italian Song, op. 39, No. 15

**VOGT, J.**  
Valse de Salon, op. 109, No. 2.

**WARREN, A. E.**  
Gratefulness, op. 72, No. 7.  
Lullaby, op. 72, No. 8.

**WERNER, MAX**  
Six Musical Gleanings, op. 10 No. 4,  
Sunshine and Shadow.  
Six Melodious Pieces, op. 18: No. 2,  
In the Quiet Hour; No. 4, Sweet  
Thoughts; No. 5, Dance of the  
Nymphs; No. 6, Dancing Sun-  
beams.

**WILLIAMS, F. A.**  
In the Swing, op. 69, No. 2

**WILKS, ROBERT W.**  
Six Characteristic Sketches, op. 2:  
No. 1, Sweet Remembrance;  
No. 2, Lads and Lassies.

**WOLFF, B.**  
Thirteen Easy Recreations, op. 187:  
No. 3, Hunter in the Wood;  
No. 6, Country Dance.  
Twelve Melodious Recreations, op.  
190: No. 2, Playfulness; No. 6,  
Song Without Words; No. 10,  
Tenderness.

**WOLFF, C. A. H.**  
Lustige Leute, op. 92: No. 2, Glück  
auf!; No. 12, Weihnachtsträume;  
No. 19, Freut euch des Lebens.

**ZACH, MAX**  
Minuet in G

If preferred, one or more Primary numbers may be selected, one Primary number being accepted in lieu of one Elementary number.

### Elementary Piano.

#### Technical Tests, etc., in Elementary Piano Examinations.

Candidates must be prepared to play, with accurate fingering and from memory, the following technical exercises:—

**SCALES.**—Major scales in C, G, D, F and B flat, and their relative minor scales, harmonic and melodic forms, hands separately, in quarter and eighth notes, compass four octaves, metronome,

 = 63

**CHORDS.**—Major and minor chords, triad form, and dominant seventh chords, four note form, all with inversions, solid and broken, hands separately, in all keys indicated under the heading of scales. The solid chords to be played in whole notes, and the broken chords in quarter notes, compass two octaves, metronome,

 = 69

**OCTAVES.**—Staccato octaves in all keys indicated under the heading of scales, in quarter notes, hands separately, compass two octaves, metronome,



Candidates whose hands are too small to stretch the octave, may substitute double sixths, using the first and fifth fingers.

**EAR TEST.**—Candidates will be required to sing without accompaniment a major scale, or, if unable to sing, will be expected to recognize errors, if any, in the scale as played by the examiner (the candidate not to see the keyboard).

The metronome will be used in connection with the technical tests at the Elementary Piano Examination.

### Elementary Piano Certificate.

Successful candidates in the Elementary Piano Examination will receive the Elementary Piano Certificate of the University.

For particulars as to fees, see page 605.

Marks are awarded under the following heads in the Elementary Piano Examination:—

	MAXIMUM
Scales,	8
Chords and octaves,	8
Accuracy of fingering and notation,	17
Phrasing and interpretation,	20
Quality of touch,	16
Choice and steadiness of tempo,	12
Use of pedals,	8
Ear test,	5
Memory playing,	6

**PIANOFORTE.****Primary Grade.**

Candidates will be required to prepare eight numbers in all, chosen from the following list of compositions, one of which must be by Bach, and one by Beethoven—the candidate to be allowed freedom of choice in the remaining six pieces:—

**Primary Piano.**

- ALETTER, W.  
Melodia in F.  
Sweet Message.
- AMBROISE, PAUL.  
Chant du Soir.
- ARNE.  
Sonata in A. (Schott, publisher.)
- BACH, J. S.  
Twelve Little Preludes (Peters' edition, vol. 200), Nos. 1, 2 and 3; 4 and 5; 6, 7 and 8; 9 and 10.  
Six Little Preludes (Peters' edition, vol. 200), any two.  
Twenty Easy Pieces (Peters' edition, vol. 1959), 1, 2 and 3; 4 and 5; 6, 8 and 10; 15, 16 and 20.
- BACH, PH. E.  
Rondo in E minor.
- BACHMANN, G.  
The Grasshopper
- BAUMFELDER, F.  
Bonne Humeur, op. 274.
- BEETHOVEN, L. VAN  
Sonatas in C, G, F. Any one.  
Variations in F on a Swiss Air.  
Six Variations in G on "Nel cor più."  
Seven Bagatelles, op. 33, No. 1 in E flat; No. 2 in C; No. 4 in A; No. 6 in D; any one.
- BEHR, FRANZ  
Bluette (The Pearl).
- BELLAIRS, R. H.  
Liebesgruss.
- BIRD, A.  
Sketch, op. 15, Nos. 1, 2, 3: any one.
- BOHM, C.  
The Fountain.  
Give me thy Heart, op. 266.
- BORODIN, A.  
Nocturne, G flat.
- BOROWSKI, F.  
Valse Champêtre.  
Album Lyrique, Nos. 1 and 2.  
Album Lyrique, No. 5.
- BREWER, HERBERT  
Auf Wiedersehen (Novello's edition).
- BROCKWAY, HOWARD  
Evening Song, op. 26, No. 4.
- BRUELL, F.  
Gavotte, op. 47, No. 1.  
Mazurka, op. 69 No. 2.
- CARSE, A. VON AHN  
Gavotte in G (Novello's edition).
- CHAMINADE, C.  
Album des enfants, op. 123, Nos. 2, 4 and 5; 7, 8 and 9; 10, 11 and 12
- CLEMENTI, M.  
Sonatas, op. 36; No. 2 in G; No. 3 in C; No. 5 in G; No. 6 in D any one.
- CRAMER, P.  
Four Sonatas, op. 6; any one.
- CUI, C.  
Canzonetta.  
Bagatelle Italienne.
- DELIBES, LEO  
Pizzicati (from Sylvia Ballet).  
Passepied, No. 6; Dances in the Old Style.
- DELLAFIELD, HENRY  
Petite Valse de Concert, op. 62, No. 14.
- DIABELLI, ANT.  
Four Sonatas, op. 151; any one.  
Four Sonatas, op. 20; any one.
- DOERING, C. H.  
Six Easy Characteristic Studies, op. 209; any two.
- DUCELLE, PAUL.  
Queen of Roses, op. 20, No. 6.
- DURAND, A.  
Chaconne in A minor, op. 62.  
Valse in E flat.
- DUSSEK, J. L.  
Rondo in D, La Matinée.  
Rondo in E flat, Le Garçon Laboureur
- DVORAK, ANTON  
Humoresque, op. 101, No. 7.
- ECKHARDT, RUDOLF  
Spring's Serenade, op. 18.
- FOERSTER, ALBAN  
Three Sonatas, op. 42; any one.  
Melody, op. 104, No. 1.
- FLAGNY, A.  
Rondo (Schott, publisher).
- GABRIEL-MARIE,  
La Cinquantaine  
Badinage.

- GADE, NIELS**  
Five Christmas Pieces, op. 36; any two.
- GREGH, L.**  
Pastorale (Return of the Reapers), op. 13.
- GRIEG, ED.**  
Lyrische Stücke, op. 12; any three.  
Lyrische Stücke, op. 71, Nos. 6 and 7.
- GURLITT, CORNELIUS**  
Flying Leaves, op. 112, Nos. 1 and 3; 7 and 9; 8.
- HARDY, EDMUND**  
Two little Songs without Words, Nos. 1 and 2.  
To Daffodils (Tone Poem).
- HAYDN, J.**  
Gipsy Rondo.  
Sonata in C (Peters' edition, vol. 713 A), No. 5; any two movements.
- HENSELT, A.**  
Romance de Thal.
- HITZ, F.**  
Pastorale in C major.
- HOLBROOKE, JOS.**  
Souvenir de Printemps. (Novello's edition).
- HOLLAENDER, V.**  
Canzonetta.
- HORVATH, GEZA.**  
Sonatina in D minor, op. 108 (Breitkopf & Hartel ed.).  
Dance Italienne, op. 63, No. 1.
- HUENTEN, F.**  
Rondetto, C major, op. 15.  
Introduction and Rondo, op. 78 No. 1.
- HUMMEL, J. N.**  
Rondo in C, op. 52.
- JADASSOHN, S.**  
Spring Song, op. 93.
- JENSEN, A.**  
Happy Wanderer, in A flat.  
The Mill, op. 17, No. 3.
- JUNGMANN, A.**  
Will-o'-the-Wisp, op. 217, No. 3.
- KARGANOFF, G.**  
Romance, op. 20, No. 9.  
Berceuse, op. 20, No. 11.
- KJERULF, H.**  
Berceuse, D flat, op. 12, No. 5.  
Frühlingsweben, op. 24, No. 2.
- KULLAK, TH.**  
Kinderleben, op. 62; any three.
- KUESSNER, ALBERT**  
"Moon-Moths," op. 8; any one.
- LACK, T.**  
Cabaletta, op. 83.  
Arietta, op. 97.
- LANG, GUSTAV**  
Six Characteristic Pieces.
- LEO, LEONARDO**  
Arietta in G minor (Legnick ed.).
- LICHNER, H.**  
Heimkehr (The Return), op. 175, No. 6.
- LYON, JAMES**  
Novelette.  
Morgengruss.  
Autumn (Novello's ed.).
- MACDOWELL, E.**  
Romanza, op. 39.  
Clair de Lune, op. 37, No. 1.  
Arabesque.
- MANNS, OTTO**  
A Northern Cradle Song (Novello's ed.).
- MASSNET, J.**  
Mélodie, op. 10.
- MENDELSSOHN,**  
Gondellied in A.
- MERKEL, G.**  
Wanderer's Song, op. 18, No. 2.  
Impromptu, op. 18, No. 3.
- MEYER, A.**  
Mazurka, Caprice, No. 2.  
At Evening, No. 3.
- MEYER, CHAS.**  
Barcarolle, op. 121, No. 7.
- MEYER-HELMUND,**  
Chanson d'amour.  
Tanzweise, op. 28, No. 2.  
Serenade de Pierrot.
- MOORE, GRAHAM P.**  
La Tzigane.  
Légende slave, op. 28, No. 1.
- MOSZKOWSKI,**  
Mélodie, op. 18.  
Tema, op. 10, No. 2.  
Rêverie, op. 15, No. 2.  
Miniatures, op. 28, No. 1.  
Valse Mignonne, op. 89, No. 2.
- MOZART,**  
Sonata No. 1 in C major; any two movements (Schirmer, vol. 65).
- NOELCK, AUG.**  
Gavotte Tendre, op. 137.  
Valse Elegante.
- PACHER,**  
Swiss Folk Song, op. 69, No. 3.
- PAUL, EMIL**  
Frühlingsreigen.
- PIECZONKA, A.**  
Tarantella in A minor.



- PIERNÉ, G.  
Cradle Song in A.  
Valse in A.
- RAFF, J.  
Romance, op. 2, No. 2.
- RAVINA, H.  
Petit Bolero, op. 62.
- REINECKE, C.  
Sonatina in C, op. 127 A, No. 1.  
Sonatina in F, op. 127 A, No. 3.  
Miniature Sonata in F, op. 136,  
No. 3.
- SAINT-SAENS,  
Romance sans Paroles.
- SARTORIO, A.  
Murmuring Brooklet, op. 450.  
Jagdzug, op. 726.  
The Rhine Maidens Waltz, op. 762]
- SCHARWENKA, PH.  
Hinaus ins Freie, op. 34, No. 2.  
Soldaten-Marsch, op. 34, No. 5.  
Capriccietto, op. 45, No. 3.  
Scherzino, op. 45, No. 7.  
Tarantelle, op. 45, No. 8.  
Menuett, op. 58, No. 6.
- SCARLATTI, D.  
Tempo di Ballo in D.
- SCHUBERT, FR.  
Waltzes, op. 9, Nos. 1, 2 and 3.
- SCHUETT, E.  
Canzonetta in D major.
- SCHUMANN, R.  
Album für die Jugend, op. 68, Nos.  
1, 2, 3 and 4; 10; 11; 19 and 20.
- SCHYTTE, LUDWIG  
Berceuse, op. 26, No. 7.  
Evening Bells, op. 84, No. 5.  
Frühlingsblumen.
- SEISS, ISIDOR  
Drei Sonatinen, op. 8; any one.
- SIMON, ERNST  
Squirrel's Frolic.
- STRELEZKI, ANTON  
Menuet à l'antique in E flat.
- TSCHAIKOWSKI, P.  
Chanson Triste.  
Jugend Album, op. 39, Nos. 1, 2  
and 3; 4, 11 and 12; 20 and 21;  
22, 23 and 24.
- VINCENT, RUTH  
Once again, op. 33.
- VOLKMANN, R.  
Grandmother's Songs, op. 27,  
Nos. 1 and 2; 6 and 7; 4, 5 and  
8 (Augener edition).
- WACHS, P.  
Caprice Bohémien.  
Chanson du Soir.  
Joyeux Carillon.
- WESTOBY, F. D.  
Consolation (Melody in D).
- WILM, NICOLAI VON  
Zwölf Kleine Tonstücke, op. 12,  
Nos. 1 and 2; 3 and 4.  
Le Carnaval de Nice, op. 201, Nos.  
1, 2, 3, 4, 5; any two.
- WOLSTENHOLME, W.  
Chanson Triste.  
Allegretto in E flat.

### Primary Piano.

#### Technical Tests, etc., in Primary Piano Examinations.

Candidates must be prepared to play, with accurate fingering and from memory, the following technical exercises:—

**SCALES.**—All major and minor (harmonic and melodic) and chromatic scales, legato and staccato, hands separately, four octaves, in quarter notes, metronome,

$$\text{♩} = 120$$

**CHORDS.**—Major and minor triads and chords in four note form, and dominant seventh chords, with inversions, hands separately—solid and broken. Solid chords to be played in half notes only.

$$\text{♩} = 84$$

Broken chords, in the four note form, may be substituted for solid chords in the case of small hands.

**OCTAVES.**—Staccato octaves, in quarter notes, on any required scale, hands separately.



**ARPEGGIOS.**—Arpeggios of all major and minor common chords, compass four octaves, fundamental position, hands separately, quarter notes.



**SIGHT PLAYING.**—Candidates will be required to play at sight an easy piece.

**EAR TEST.**—Candidates will be required to sing without accompaniment a major scale, or, if unable to sing, will be expected to recognize errors, if any, in the scale as played by the examiner (the candidate not to see the keyboard). Candidates will also be tested in the intervals of major thirds, perfect fifths and octaves.

The metronome will be used in connection with the technical tests at the Primary Piano Examination.

### Primary Piano Certificate.

Successful candidates in the Primary Piano Examination will receive the Primary Piano Certificate of the University.

For particulars as to fees, see page 605.

Marks are awarded under the following heads in the Primary Piano Examination—

	MAXIMUM
Scales.	8
Chords and octaves.	8
Accuracy of fingering notation, etc.,	15
Phrasing and interpretation,	20
Quality of touch,	15
Choice and steadiness of tempo,	10
Use of pedals,	8
Sight reading,	5
Ear test,	5
Memory playing,	5

## Junior Grade.

Candidates will prepare eight numbers selected from the following list of compositions, one of which must be by Bach, one by either Haydn, Mozart or Beethoven, and one by Chopin—the candidate to be allowed freedom of choice in the remaining five numbers:—

## Junior Piano.

**ABELLE, VICTOR**  
Tarantelle, op. 19.

**BACH, J. S.**  
Fifteen Two Part Inventions (Peters' edition, vol. 201), 1 and 8; 3 and 4; any one of remaining numbers.  
Six short Fugues, No. 3; No. 4; No. 5 (Peters' edition, vol. 200).  
Fantasia in G minor (Peters' edition, vol. 215).  
Prelude and Fugetta in D minor, No. 6 (Peters' edition, vol. 200).  
Prelude and Fugetta in E minor, No. 7 (Peters' Edition, vol. 200).

**BACH, PH. EM.**  
Rondo Andantino, B minor (Schirmer).

**BACHMANN, G.**  
La Capricieuse (The Coquette).

**BEETHOVEN, L. VAN**  
Rondo in C major, op. 51, No. 1.  
Rondo in A.  
Sonata in G minor, op. 49, No. 1.  
Sonata in G, op. 49, No. 2.  
Bagatelles, op. 119, Nos. 1 and 2; 5 and 6; 9 and 11.  
Bagatelles, op. 126, No. 2; No. 3; Nos. 5 and 6.

**BEETHOVEN-SEISS,**  
Contre-Tänze (any one).  
Deutsche-Tänze (any one).

**BOHM, CARL**  
Maybells, op. 135.  
Frolic of the Butterflies, op. 282.  
Hunter's Greeting, op. 309.

**BORCH, GASTON**  
Deux Romances sans Paroles, D flat, op. 67, No. 1; No. 2.

**BOROWSKI, F.**  
La Capricieuse.  
Serenata.  
Minuet in G.

**ARSE, A. VON AIIN**  
Valse (No. 2 in B flat).

**CHAMINADE, C.**  
Pièce Romantique, op. 9, No. 1, and Gavotte, op. 9, No. 2.  
Pierrette, op. 41.  
Ritornelle, op. 83.

**CHOPIN, FR.**  
Valse in F, op. 34, No. 3.  
Valse in A flat, op. 69, No. 1.  
Valse in B minor, op. 69, No. 2.  
Mazurka in A minor, op. 7, No. 2.  
Mazurka in B minor, op. 30, No. 2.  
Nocturne in E flat, op. 9, No. 2.  
Nocturne in G minor, op. 37, No. 1.

**COENEN, WILLIAM**  
Melody in E flat and In Springtime (Novello's edition).

**COLERIDGE-TAYLOR, S.**  
Intermezzo and Eastern Dance (From Nero Suite).

**DAVIDOFF (REINECKE)**  
Romance sans Paroles, op. 23.

**DEBUSSY, C. A.**  
Deux Arabesques (any one).

**DELLAFIELD, HENRY**  
Spanish Fantasia, op. 64, No. 16.  
Petite Polonaise de Concert, op. 67, No. 19.

**DOLMETSCH, VICTOR**  
Musette in A minor, op. 105 (Durand and Sons' ed.).

**DUCELLE, PAUL**  
At the Fountain, op. 18.

**DULAY, VICTOR**  
Valse Tzigane, op. 20, No. 2.  
Air de Ballet, op. 21.

**DURAND, AUG.**  
2nd Valse, op. 86.

**DUSSEK, J. L.**  
Rondo in B flat (Les Adieux).  
Rondo in F (La Chasse).

**DVORAK, ANTON**  
Polka, op. 39, No. 2.  
Menuett, op. 39, No. 3.  
Romance, op. 39, No. 4.

- FIELD, JOHN**  
Nocturne in E flat, No. 1.  
Nocturne in B flat, No. 5.
- FLORIDINA, P.**  
Passage de la Caravane dans le désert,  
op. 9, No. 2.  
(Gebrüder Hug & Co., Leipzig.)
- FORSYTH, W. O.**  
Even Song, op. 14, No. 3.  
In the Twilight, op. 31, No. 1.  
Two Picturesque Valses, op. 29  
(either one).
- GAUTIER, LEONARD**  
Frills and Flourishes.
- GILDER, J. F.**  
Carnival Dance, op. 69.
- GODARD, BEN.**  
Canzonetta, op. 35, No. 3.  
Au Matin, op. 83.  
Gigue, op. 103.
- GOTTSCHALK, L. M.**  
L'Étincelle (The Spark).
- GRANDOS, E**  
Danzas Españoles, vol. I and II;  
any two of the six dances.
- GRIEG, ED.**  
Elegische Melodien, op. 34.  
Lyrische Stücke, op. 38, any two.  
Lyrische Stücke, op. 68, Nos. 1, 2  
and 4; 3 and 5; No. 6.
- HANDEL, G.F.**  
The Harmonious Blacksmith (from  
Suite V.).  
Suites Nos. 11, 12, 15, 16; any one.  
Fantasia in C.  
Fuguetas, any two.
- HARDY, EDMUND**  
Gathering Rosebuds.
- HAYDN, JOS.**  
Arietta con Variazioni in E flat  
(Peters' ed., vol. 484).  
Thema con Variazioni in C (Peters'  
ed., vol. 484).  
Sonata in E minor, No. 2, last two  
movements (Peters' ed., vol. 713  
A).  
Sonata in E flat, No. 3, any two  
movements (Peters' ed., vol.  
713 A).  
Sonata in D, No. 7 any two move-  
ments (Peters' ed. vol. 713 A).
- HELLER, STEPHEN**  
Etudes, op. 45 and 46; any two.  
Tarantelle in A flat, op. 85, No. 2.
- HUMMEL, J. N.**  
Rondo Villageois, op. 122 (Halle  
ed.).
- JADASSOHN, S.**  
Improvisation, op. 48, No. 2.  
Remembrance (Album Leaves), op.  
71, No. 6.
- JENSEN, A.**  
Wanderbilder, op. 17, Nos. 1 and 2;  
7 and 8; No. 9.  
Berceuse, op. 12 (Augener's ed.).
- JENSEN-NIEMANN,**  
Murmuring Zephyrs.
- KROGMANN, C. W.**  
Ride of the Storm Witches, op. 46.  
The Fireflies' Carnival, op. 49, No. 4.  
Fetes des Fleurs, op. 80.
- KRUG, D.**  
Wilde Bluthen, op. 329.
- KUESSNER, ALBERT**  
Hesitation.  
Memories.  
The Evening Hour.  
Dance of the Wood Nymphs.
- LISZT, FR.**  
Consolation, No. 3, in D flat major  
Consolation, Nos. 1 and 4.
- LOETZ, PAUL DE**  
Caprice Etude.
- MACDOWELL, ED.**  
Woodland Sketches, Nos. 1 and 6.  
Humoreske, op. 28, No. 1.  
The Eagle, op. 32, and  
The Brook, op. 32.  
Sea Pieces, op. 55, Nos. 1 and 2, 6  
and 7.  
Idyllen, op. 28, any two.
- MACFARREN, WALTER**  
Rondino Grazioso.  
Romance (Mariana).
- MACKENZIE, A. C.**  
Rustic Scenes, op. 9, any two  
(Augener's ed.).
- MENDELSSOHN, F.**  
Kinderstücke, op. 72, Nos. 1 and 2;  
3 and 4; No. 5; No. 6.  
Songs without words, Nos. 2, 4, 6,  
12, 16, 18, 29, 35, 48; any two.
- MERCADANTE, GAETANO**  
Doll Dance.
- MERKEL, G.**  
Polonaise in A, op. 28.  
Tarantella in A minor, op. 92.
- MEYER-HELMUND,**  
Nocturne in G flat major.  
Arabesque in B major, Tanzweise.
- MOSZKOWSKI, M.**  
Musical Moments, op. 7, No. 1.  
Scherzo in F major.  
Serenata, op. 15, No. 1.
- MOZART, W. A.**  
Fantasia in D minor.  
Rondo in D.  
Variations in A, No. 16 (Peters' ed.,  
vol. 273).  
Sonata in F, No. 5 (Peters' ed., vol.  
485).  
Sonata in C, No. 16, last two move-  
ments (Peters' edition, vol. 485)

- NEVIN, ETHELBERT  
A Sketch Book, op. 2, any two.  
A Day in Venice, op. 25, Nos. 3 and 4.
- PADEREWSKI, I. J.  
Mélodie, op. 8, No. 3.  
Chant sans Paroles.  
Minuet, op. 14, No. 1.  
Minuet, op. 16, No. 7.
- PUGNO, RAOUL  
Serenade à la Lune.
- RAFF, J.  
Suite de Morceaux, op. 75, Nos.  
1, 6, 10, any one.
- RAMEAU,  
Gavotte (Le Tambourin).
- RUBINSTEIN, ANT.  
Polka, op. 82, No. 7.  
Mélodie in F.
- SAINT-SAENS, C.  
First Mazurka, op. 21.  
Gavotte in C minor, op. 25.
- SCARLATTI-TAUSIG,  
Pastorale in E minor.  
Capriccio in E.
- SCHARWENKA, X.  
Polish Dance, E flat minor.  
Liebesliedchen, op. 68, No. 1.  
A Souvenir, op. 68, No. 3.
- SCHUBERT, FR.  
Impromptu in E flat, op. 90, No. 2.  
Impromptu in G major, op. 90, No. 3.  
Impromptu in A flat, op. 90, No. 4.  
Moments Musicaux, op. 94, No. 2 in  
A flat.  
Moments Musicaux, op. 94, No. 1 in  
C.  
Impromptu in A flat, op. 142, No. 2.  
Zwölf Ländler, op. 171.
- SCHUMANN, R.  
Waldscenen, op. 82, Nos. 1 and 2.  
Album für die Jugend, op. 68, Nos.  
6, 7, 8, and 9; 22 and 23; 28 and  
30.  
Kinder Sonata in G, op. 118 1st  
and 2nd movements; 2nd and  
3rd movements.  
Nachtstücke, op. 23, No. 4.
- SCHUETT, ED.  
Valse lente, op. 17, No. 2.  
Humoresque, op. 20, No. 1.  
Chanson Triste, op. 20, No. 4.  
Cantique d'Amour, op. 30, No. 6.  
Rêverie, op. 34, No. 5.  
Deux Moments, op. 76, any one.
- SCHYTTÉ, L.  
Rhapsody.
- SGAMBATI, G.  
Intermezzo, op. 21, No. 4.
- STAVENHAGEN, B.  
Caprice in B minor, op. 2, No. 3.  
Pastorale, op. 2, No. 2.
- TSCHAIKOWSKI,  
Valse in A flat, op. 40, No. 8.  
Barcarolle, "June," op. 37.  
Valse in F sharp minor, op. 40, No. 9.  
Nocturne, op. 10, No. 1.  
Danse Russe, op. 40, No. 10.  
Song without Words, op. 2, No. 3.
- WACHS, PAUL  
Capricante.  
Valse Legere.
- WELSMAN, F. S.  
Menuet in A.
- WHEELDON, H. A.  
Chant d'Amour.
- WOLLENHAUPT  
Morceau en forme d'Etude, in A  
flat major.
- WOYCKE, EUGEN.  
Première Tarantelle, op. 56, No. 3.

### Technical Tests, etc., in Junior Piano Examinations.

Candidates must be prepared to play, with accurate fingering and from memory, the following technical tests:—

SCALES.—All major, minor (harmonic and melodic) and chromatic scales, in quarter and eighth notes legato, compass four octaves:—

$$\begin{array}{l} \text{♩} = 120, \text{ hands separately.} \\ \text{♩} = 100, \text{ hands together.} \end{array}$$

Major scales staccato, hands separately, at a moderate tempo. Candidates will also prepare the scales in accents of groups of three and four, compass three and four octaves respectively.



**CHORDS.**—All major and minor common chords, solid and broken, in triad and four note forms, with inversions as may be required by examiner; dominant sevenths and diminished seventh chords, with inversions, four note form, hands together. Solid chords to be played in half notes and the broken chords in quarter and eighth notes.

$$\text{♩} = 126.$$

**ARPEGGIOS.**—Arpeggios of common chord, and dominant and diminished seventh chords, compass four octaves, with inversions, in quarter and eighth notes.

$$\text{♩} = 132, \text{ hands separately.}$$

**OCTAVES.**—Staccato and legato, in any required scale, hands together, staccato in quarter and eighths, legato in quarter notes.

$$\text{♩} = 112.$$

**EAR TESTS.**—Candidates will be prepared to sing a major scale, without accompaniment, and will be tested in the intervals of a major third, a perfect octave, a perfect fourth, a perfect fifth, and a major sixth. Candidates who may be unable to sing will be required to recognize the same intervals when played by the examiner (the candidate not to see the keyboard).

**SIGHT READING.**—Candidates will also be tested in sight playing

The metronome will be used in connection with the technical tests at the Junior Piano Examination.

Successful candidates in the Junior Piano Examination will, upon passing the Junior Theory Examination, be awarded the Junior Piano Certificate of the University.

For particulars as to fees, see page 605.

Marks are awarded under the following heads in the Junior Piano Examination:—

	MAXIMUM.
Scales,	8
Chords and arpeggios,	8
Octaves.	4
Accuracy of fingering, notation, etc.,	12
Phrasing, accent, etc.,	10
Use of pedals,	8
Conception and interpretation,	12
Quality of touch.	10
Choice and steadiness of tempo,	10
Sight reading,	5
Memory playing.	8
Ear test.	5

**Intermediate Grade.**

Candidates will prepare eight numbers selected from the following list of compositions, one of which must be by Bach, one by Beethoven, one by Chopin, and one by Schumann—the candidate to be allowed freedom of choice in the remaining four numbers. One of the eight numbers must be prepared by the candidate without the aid of the teacher.

**Intermediate Piano.**

- ABENIZ, L.**  
Prelude and Orientale, op. 232, No. 2.
- ARENSKY,**  
An der Quelle; Basso Ostinato.  
Valse, E flat major, op. 36.  
Étude, F sharp major, op. 36.
- BACH, J. S.**  
Three Part Inventions (Peters' edition, vol. 201), Nos. 8 and 9; 10 and 11; 14 and 15.  
Fantasia in C minor (Peters' edition vol. 207).  
Partitas, Nos. 1; 2; 3; any one complete (Peters' edition, vol. 205).  
Forty-eight Preludes and Fugues vol. 1 (Peters' edition, vol. 2790A).  
Prelude and Fugue in C, No. 1.  
Prelude and Fugue in C sharp, No. 3.  
Prelude and Fugue in F, No. 11.  
Prelude and Fugue in G minor, No. 16.  
Prelude and Fugue in D, No. 5, vol. 11 (Peters' ed. 2790B).  
Prelude and Fugue in A minor, No. 20.
- BACH, PH. EM.**  
Sonata in F minor, No. 1 (Peters' edition, vol. 276).  
Sonata in A flat, No. 6.
- BEETHOVEN, L. VAN**  
Twelve Variations in A (Peters' edition, vol. 298A).  
Sonata, op. 2, No. 3, in C.  
Sonata, op. 7, in E flat.  
Sonata, op. 10, No. 2, in F.  
Sonata, op. 10, No. 3, in D.  
Sonata, op. 13, in C minor.  
Andante in F.  
Rondo a capriccio, op. 129.
- BIZET,**  
First Menuet l'Arlésienne in C minor.
- BOWEN, YORK**  
Nocturne (from Miniature Suite).  
Avison ed.
- BRAHMS, J.**  
Balladen, op. 10, No. 1.  
Balladen, op. 10, No. 2.  
Capriccio, op. 76, No. 2.  
Zwei Rhapsodien, op. 79, No. 2.  
Fantasien, op. 116, Nos. 4 and 5; 6 and 7.  
Drei Intermezzi, op. 117, any two.  
Rhapsodie in E flat, op. 119, No. 4.
- BRASSIN**  
Nocturne in G flat major, op. 17.
- CHAMINADE, C.**  
Six Concert Studies, op. 35, any two.  
Preludes Mélodiques, op. 84, Nos. 1 and 2.
- CHOPIN, FR.**  
Valse in A flat, op. 34, No. 1.  
Valse in A flat, op. 42.  
Valse in D flat, op. 70, No. 3.  
Valse in E minor, op. Posthumous.  
Mazurka in B, op. 56, No. 1.  
Mazurka in C, op. 56, No. 2.  
Mazurka in C minor, op. 56, No. 3.  
Polonaise in C sharp minor, op. 26, No. 1.  
Polonaise in E flat minor, op. 26, No. 2.  
Polonaise in C minor, op. 40, No. 2.  
Polonaise in B flat, op. 71, No. 2.  
Nocturne in B, op. 9, No. 3.  
Nocturne in F, op. 15, No. 2.  
Nocturne in F sharp, op. 15, No. 2.  
Nocturne in B, op. 32, No. 1.  
Nocturne in B, op. 62, No. 1.  
Nocturne in E, op. 62, No. 2.  
Études, op. 10, Nos. 3; 5; 12.  
Études, op. 25, Nos. 1 and 2; 3; 7.  
Impromptu in G flat, op. 51.  
Impromptu in F sharp, op. 36.  
Fantasia Impromptu, C sharp minor, op. 66.  
Berceuse, op. 57, and Tarantelle, op. 43.  
Preludes, op. 28, Nos. 1, 2, 3, 4, 5 and 6; 14, 15 and 16; 17 and 18.
- CUI, CESAR**  
Causerie (Étude), op. 4, No. 6.
- D'ALBERT, EUGENE**  
Walzer, op. 16, No. 1.  
Suite in D minor, op. 1, 1st, 2nd and 3rd movements; 4th and 5th movements.  
Acht Klavierstücke, op. 5, Bk. Nos. 2, 3 and 4.
- DOEHLER, TH.**  
Tarantelle, G minor.
- DUPONT, A.**  
Gavotte in G minor, op. 37, No. 1.

- DUSSEK, J. L.**  
Sonata in D, op. 9, No. 3.  
Sonata in A, op. 43.
- DVORAK, ANT.**  
Dumka, op. 12, No. 1; and Furiant, op. 12, No. 2.  
Legenden, op. 59, Nos. 6 and 7: 8, 9 and 10.
- FORSYTH, W. O.**  
Poème d'Amour, op. 31, No. 2.  
By the Sea, op. 28.
- GLAZOUNOW, A.**  
La Nuit, Etude, op. 31, No. 3.
- GLINKA-BALAKIREW,**  
The Lark.
- GODARD,**  
Guirlandes, op. 107, No. 11.  
En Route, op. 107, No. 12.
- GRIEG, ED.**  
Romance, op. 51, for two pianos (either piano part).  
Menuett, op. 67.  
Lyrische Stücke, op. 43, any five.  
Lyrische Stücke, op. 54, any three.  
Lyrische Stücke, op. 71, Nos. 5, 6 and 7.  
Sonata in E minor, op. 6.
- GROENDAHL, A. BACKER**  
Suite, op. 44, Nos. 1 and 2.  
Au Bal, op. 15, No. 2.
- HANDEL, G. F.**  
Suites, Nos. 4; 9; 14.
- HAYDN, JOS.**  
Andante Varie in F minor (Peters' ed., vol. 484).  
Sonata in E flat, No. 1 (Peters' ed., vol. 713A).  
Sonata in E minor, No. 2 (Peters' ed., vol. 713A).  
Sonata in A flat, No. 8 (Peters' ed. vol. 713A).
- HELLER, STEPHEN**  
La Chasse, E flat, op. 29.  
Capriccio, op. 63.  
Sleepless Nights, op. 82, any five.
- HENSELT, AD.**  
Si oiseau j'étais, op. 2, No. 6.  
Orage, tu ne saurais m'abattre! op. 2, No. 1.  
2 Romances russes, op. 22.  
Valse Melancolique, op. 36.
- HOLLAENDER, A.**  
Marche, op. 39, No. 1.
- HUMMEL, N.**  
La Belle Capriccioso, op. 55.  
Rondo (Le Galanté), op. 120.
- HURLSTONE, WM. Y.**  
Capriccio in B minor (Avison ed.).
- JADASSOHN, S.**  
La Valse de Sylphide, op. 26, No. 4, and La Tarantella, op. 26, No. 7.  
Acht Kanons (Serenade), op. 35. Nos. 3, 6 and 8.
- JENSEN, A.**  
Wanderbilder, op. 17, Nos. 4, 5, and 6; 10 11 and 12.  
Ricordanza in B.
- JUON, PAUL**  
Humoreske, op. 12, No. 5.
- KARGANOFF, G.**  
Tarantelle, op. 4.  
Valse Caprice, op. 16.
- KULLAK, TH.**  
School of Octave Playing, Part 2, No. 1; 2; 3 and 4; 5; 6.
- LACHNER, VINCENZ**  
Prelude and Toccata in D minor, op. 57.
- LESCHETIZKY, TH.**  
The two Larks, op. 2, No. 1; and Dance à la Russe, op. 40, No. 5.  
La Piccola, op. 43, No. 2, and Toccata, op. 46, No. 5.
- LISZT, FR.**  
Liebesträume, any one.  
Sonnet de Petrarca, No. 123.  
Sposalizio.  
Soirées de Vienna (Schubert), No. 4; 6.  
Widmung (Schumann).  
Morgenständchen (Schubert)  
Auf Flügeln des Gesanges (Mendelssohn).  
Rhapsodies Hongroises, No. 5; 11; 13.  
Six Chants Polonais de Chopin, Nos. 1, 2 and 3; 4, 5 and 6.
- MACDOWELL, E. A.**  
Erzählung, op. 17, No. 1.  
Barcarolle, op. 18, and Humoreske, op. 18.  
Witches Dance, op. 17, No. 2.  
Sechs Gedichte nach Heinrich Heine, op. 31, any three.  
Idyll, Shadow Dance, Intermezzo, op. 39.  
Wald Idyllen, op. 19, Nos. 1, 3, and 4.
- MENDELSSOHN, F.**  
Song without words, Nos. 5, 31 and 34.  
Andante and Rondo Capriccioso, op. 14.  
Variations, op. 83.  
Characterstücke, op. 7, Nos. 1, 2 and 3; 5, 6 and 7.  
Capriccio Brilliant, op. 22.  
Fantasia in F sharp minor, op. 28.  
Rondo Brilliant in E flat, op. 29.  
Prelude and Fugue in E minor (Posthumous).
- MOSZKOWSKI, M.**  
Étincelles, op. 6.  
Waltz, A flat major.  
Air de Ballet, op. 36, No. 5.  
Moment Musical, op. 7, No. 2.  
En Automne, op. 35, No. 4.  
Guitarre, op. 45, No. 2.  
Menuet, op. 17, No. 2.  
Liebeswalzer, op. 5.  
Scherzo Valse, op. 40.  
Valse in A major, op. 17, No. 3.

- MOZART, W. A.  
 Pastorale Variée.  
 Thème with Variations in A, No. 8 (Peters' ed., vol. 273).  
 Sonata in D, No. 3 (Peters' ed., vol. 486).  
 Sonata in A, No. 12.  
 Sonata in D, No. 13.  
 Fantasia in C minor.
- NEVIN, E.  
 Shepherds All, Lullaby.  
 Shepherd's Tale, Tournament.
- NOESSLER, ED.  
 Drei Phantasiestücke, op. 23 (Breitkopf & Härtel ed.).
- PADEREWSKI, I. J.  
 Légende, op. 16, No. 1.  
 Mélodie, op. 16, No. 2.  
 Nocturne, op. 16, No. 4.
- PAGANINI-SCHUMANN,  
 Caprice, op. 3, No. 2.
- PIERNE, G.  
 Allegro Scherzando, op. 29.
- RACHMANINOFF,  
 Polichinelle, op. 3, No. 4.  
 Valse, A major, op. 10, No. 2.  
 Ten Preludes, op. 23, No. 3; 5 (Guthheil ed.).
- RAFF, J.  
 Rigaudon.  
 Des Abends, La Fileuse (both).  
 Polka de la Reine. Impromptu Valse, op. 94.  
 Suite, op. 71 in C, Nos. 1, 2 and 3; 4 and 5.  
 Suite, op. 72, E minor, Nos. 1, 2 and 3; 4 and 5.
- RAMEAU,  
 Gavotte and Variations, A minor.
- REINECKE, C.  
 Ballade, op. 20.
- REUBKE, OTTO  
 Scherzo in E flat minor, op. 7.
- RHEINBERGER, JOS.  
 Trois petites Pièces de Concert, op. 5 (complete).  
 Waldmärchen, op. 8.  
 Toccata, op. 12.
- RUBINSTEIN, A.  
 Kammenoi Ostrow, op. 10, No. 22.  
 Fifth Barcarolle in A minor.  
 Nocturne in F minor.
- SAINT-SAËNS, C.  
 Third Mazurka, op. 66.  
 Valse Canariote, op. 88.  
 Prelude and Fugue in E flat minor, op. 111, No. 3.
- SCHARWENKA, X.  
 Menuet, op. 43, No. 1.  
 Rhapsodie, op. 72.  
 Abendfrieden, op. 67, No. 2.
- SCHUBERT, FR.  
 Impromptus, op. 142, Nos. 1; 3; 4.  
 Impromptus, op. 90, No. 1.  
 Sonata, op. 53. First two or last two movements.
- SCHUETT, E.  
 Trois Morceaux, op. 49. Complete.
- SCHUMANN, R.  
 Novelletten, op. 21, Nos. 1, 2, 5, 6, 7, any one.  
 Fantasiestücke, op. 12, Nos. 1, 2, 3 and 4; 6, 7, and 8.  
 Arabeske, op. 18, and Blumenstücke, op. 19.  
 Drei Romanzen, op. 28, any two.  
 Scherzo, Gigue, Romanze, Fughette, op. 32. Complete.  
 Waldscenen, op. 82, Nos. 2, 4, 5 and 6; 7, 8 and 9.
- SCHYTTÉ, L.  
 Wald Elfen, op. 70, No. 5.  
 Ueber die Steppe hin.
- SGAMBATI,  
 Nocturne in B minor.  
 Menuetto Vecchio.  
 Toccata in A flat.
- SIBELIUS, J.  
 Romance in D flat, op. 24, No. 9, and Kyllikki, op. 41, No. 1.  
 Kyllikki, op. 41, Nos. 2 and 3.
- SINDING, C.  
 Nocturne in B minor, op. 20, No. 1.  
 Pianoforte Stücke, op. 24, No. 1 with 2 or 3.  
 Character Stücke, op. 32, Nos. 1, 2 and 3.  
 Pianoforte Stücke, op. 62, Nos. 4 and 5.
- SMETANA, FR.  
 Trois Polkas de Salon, op. 7, Nos. 1 and 2.
- STRAUSS, RICHARD  
 Stimmungsbilder, op. 9, Nos. 1 and 2; 3, 4 and 5.
- SUK, JOSEF  
 Erlebtes und Erträumtes, op. 30, Nos. 1 and 3; 4 and 5; 6 and 7; 8 and 9 (Breitkopf & Härtel ed.).
- SCARLATTI-LESCHETIZKY,  
 Sonata in A.
- TAUBERT,  
 La Campanella, op. 41.

**TSCHAIKOWSKI, P.**  
 Romance, op. 5, and Welhnachten,  
 op. 37, No. 12.  
 Réverie, op. 9, No. 1 and Carnival,  
 op. 37, No. 2.  
 Valse Caprice, op. 4.  
 Variations in F.

**VOGRICH,**  
 Staccato Caprice.

**WAGNER-BENDEL,**  
 Walther's Preislied.

**WAGNER-LISZT,**  
 Pilgrims' Chorus from *Tannhäuser*.  
 Elsa's Bridal Procession.  
 Spinning Song.


**WEBER, C. M. VON**  
 Invitation pour la Valse, op. 65  
 (Bulow ed. necessary).  
 Rondo Brillante, op. 62.  
 Polacca Brillante, op. 72

**WIENIAWSKI,**  
 Valse de Concert, D flat, op. 3.

### Technical Tests, etc., in Intermediate Piano Examination.

Candidates must be prepared to play, with accurate fingering and from memory, the following technical tests:—

**SCALES.**—All major, minor and chromatic scales in similar motion, legato, compass four octaves, in quarter, eighth and sixteenth notes, and staccato in quarter and eighth notes. Major and harmonic minor scales in similar motion separated by a third, a sixth, and a tenth; and in contrary motion beginning on the same note or octave, in quarter, eighth and sixteenth notes:—

 = 132, hands separately.

 = 112, hands together.

Candidates will also prepare the scales with accents in groups of three, four, six, eight and nine.

**CHORDS.**—All major and minor common chords with inversions in triad and four note forms; dominant seventh and diminished seventh chords, four note forms, with inversions both solid and broken with arm strokes as may be required by examiner. Broken chords to be played in quarter, eighth and sixteenth notes.

 = 120

**ARPEGGIOS.**—Arpeggios formed of all the major and minor common chords, with inversions, compass four octaves, hands separately and together; all chords of the dominant and diminished seventh, hands separately and together, in quarter, eighth, and sixteenth notes.

 = 120, hands separately.

 = 100, hands together.

**OCTAVES.**—All major, minor and chromatic scales, staccato and legato, hands separately and together.

Wrist staccato, in quarter and eighth notes.

Arm strokes and legato, in quarter notes.

 = 120.



**EAR TEST.**—Candidates must be prepared to sing, without accompaniment, the major and minor scales (harmonic and melodic) and will also be tested in any major or minor intervals within the octave. Candidates who may be unable to sing will require to distinguish the scales and intervals included in this test, when played on the piano by the examiner (the candidate not to see the keyboard).

**SIGHT READING.**—Candidates will also be tested in sight playing.

The metronome will be used in connection with the technical tests at the Intermediate Piano Examination.

### **Intermediate Piano Certificate.**

Successful candidates in the Intermediate Piano Examination, who have passed the Intermediate Theory Examination, will be awarded the Intermediate Piano Certificate of the University.

For particulars as to fees, see page 605.

Marks will be awarded under the following heads in the Intermediate Piano Examination:—

	<b>MAXIMUM.</b>
Scales,	8
Chords and arpeggios,	8
Octaves,	4
Accuracy of fingering, notation, etc.,	10
Phrasing, accent and interpretation,	16
Use of pedals,	8
Quality and gradation of tone,	10
Choice and steadiness of tempo,	10
Musicianship as displayed in self-studied pieces, etc.,	8
Memory playing,	8
Sight reading,	5
Ear test,	5

## SINGING.

### For all Candidates in Singing.

Candidates must bring their own accompanists. Teachers may act as such.

All accompaniments should be played as written.

Candidates have the option of singing the words of their solos either in the original language or in the English translation of the same.

All scales and studies should be vocalized to the word A (pronounced as in father), or sung to sol-fa syllables

### Primary Grade.

Successful candidates in the Primary Singing Examination will receive the Primary Singing Certificate of the University.

For particulars as to fees, see page 605.

Candidates must be prepared:—

- (1) To sing any major scale, without accompaniment.
- (2) To sing any major or perfect interval about a given note.
- (3) To sing three studies, selected from Nos. 1-10 of Concone's "Fifty Singing Lessons," for medium voice.
- (4) To sing four songs from the list given on page 32.

Marks will be awarded under the following heads:—

	MAXIMUM.
Voice production,	15
Correctness of intonation.	10
Management and control of breath,	8
Phrasing and expression,	12
Distinctness and correctness of pronunciation,	10
Accuracy as to tempo in the selected songs and studies,	10
Time and rhythm.	10
Flexibility,	7
Technical tests, etc.,	10
Precision and neatness in attacking and leaving notes,	8

### Junior Grade.

Before a certificate is granted in this grade, candidates must pass the Junior Examination in the Theory of Music.

For particulars as to fees, see page 605.

Candidates must be prepared:—

(1) To sing any major or harmonic minor scale at various degrees of speed, without accompaniment.

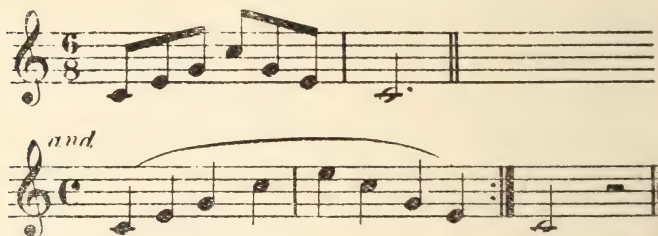
(2) To sing any major, minor or perfect interval above a given note.

(3) To sing, at sight, an easy melody, without accompaniment.

(4) To sing four studies of different character, one of which must be in a minor key, selected from "The Masterpieces of Vocalization," Book I. (Schirmer), edited by Max Spicker, which may be obtained for soprano, mezzo-soprano, alto, tenor, baritone and bass. The studies must be chosen from the book suited to the compass of the candidate's voice.

(5) To sing five songs, three from group (a) and two from group (b).

(6) To sing arpeggios of the major and minor common chord, thus:



Marks will be awarded under the following heads:—

	MAXIMUM.
Voice production,	12
Correctness of intonation,	12
Management and control of the breath,	10
Variety of tone, phrasing and expression,	10
Distinctness and correctness of pronunciation,	6
Accuracy as to tempo in the selected songs and studies,	9
Time and rhythm,	10
Flexibility,	5
Precision and neatness in attacking and leaving notes,	10
Posture and facial expression,	6
Sight singing,	5
Technical tests,	5

### Intermediate Grade.

Before a certificate is granted in this grade, candidates must pass the Intermediate Examination in the Theory of Music.

For particulars as to fees, see page 605.

Candidates must be prepared:—

(1) To sing any major, minor (melodic or harmonic) or chromatic scale, at various degrees of speed, and without accompaniment.

(2) To sing any diatonic or chromatic interval within the octave of a given note.

(3) To sing, at sight, an unaccompanied melody containing simple modulations.

(4) To sing two recitatives.

(5) To sing four studies of different character, two of which must be in a minor key, selected from "The Masterpieces of Vocalization," Book II. (Schirmer), edited by Max Spicker, which may be obtained for soprano, mezzo-soprano, alto, tenor, baritone and bass. The studies must be chosen from the book suited to the compass of the candidate's voice.

(6) To sing eight songs, four from each group marked (a) and (b).

(7) To sing arpeggios of the common chord and dominant seventh, thus:—



Marks will be awarded under the following heads:—

	MAXIMUM.
Voice production,	15
Correctness of intonation,	10
Management and control of the breath,	8
Variety of tone, phrasing and expression,	10

	MAXIMUM.
Distinctness and correctness of pronunciation,	8
Accuracy as to tempo in the selected songs and studies,	6
Time and rhythm,	8
Flexibility,	5
Precision and neatness in attacking and leaving notes,	6
Posture and facial expression,	5
Sight singing,	5
Recitative,	8
Technical tests.	6



Primary Singing.

- ABT, FR.  
 "May Song."  
 "Du der Rosen Rose."  
 "The Wanderer's Dream."  
 "Oh! little Thrush."
- ASHFORD,  
 "My Task."
- BACHE, F. E.  
 "Farewell," op. 16, No. 4.  
 "Serenade," op. 16, No. 6.
- BANCK,  
 "Singübungen," No. 12, in F (Peters').
- BARNARD, D'AUVERGNE  
 "When you are near."
- BLOW,  
 "The Self-Banished."
- BOHANNAN, JEAN  
 "If I were a Rose."
- CHADWICK, G.  
 "O Love and Joy."
- CHIPMAN, FLORENCE  
 "An evening love song."
- CLARKE,  
 "O my Garden, full of Roses."
- CLUTSAM, G. H.  
 "Myrra."
- COWEN,  
 "Eight Songs for Children," Nos.  
 1 and 4; 2 and 6, 3 and 8 (Metzler).
- DICHMONT, WILLIAM  
 "The Good Shepherd."
- ELLIOTT, LESLIE  
 "A love Song."  
 "The Whispering Wheat."
- FORSTER,  
 "Rose in the Bud."
- FORSYTH, W. O.  
 "Red Roses."
- GRIEG, ED.  
 "Glaube," op. 33, No. 11.
- HARRIS, C. L. M.  
 "The Heart's Highway."
- JOHNSON, N.  
 Two little Songs. No. 1, "The  
 Rose."  
 "Teach me the Charm."  
 "Remembrance."  
 "Good-night, pretty Stars."
- KING, WILTON  
 "Your dear Heart" (Novello edition).
- LANE, G.  
 "Life's Lullaby."  
 "Roses of June."
- LAMBERT, F.  
 "A Lament."  
 "Forethought."  
 "The Night has a thousand Eyes."
- LAWSON, M.  
 "O'er the Moor" (Old Scotch Song)  
 "Turn Ye to Me" (Old Scotch  
 Song).
- LOGAN, FRED. KNIGHT  
 "The Little Clouds."
- LOHR, HERMANN  
 "Rose of my Heart."
- METCALF, J. W.  
 "Absent."
- NEVIN, GEORGE B.  
 "The Robin."
- NEWTON, E.  
 "Remembrance and Regret" (Novello  
 edition).
- NOVELLO, IVOR  
 "Blue Eyes."
- SCHUBERT, F.  
 "Das Weinen,"  
 "Der Kreuzzug."  
 "Adieu."
- SCHUMANN, R.  
 "Volksliedchen" (The Green Hat).  
 "Lied der Braut."  
 "Zum Schluss."
- SOMERVILLE, R.  
 Three Songs of Friendship (any one).
- SPEAKS, O.  
 "Little One a-Cryin'."
- STRELEZKI, A.  
 "Baby's Dreamland."
- SULLIVAN,  
 "Where is Another Sweet?"
- WADE-SMITH, A.  
 "Bright golden Ring."
- WHITE, M. V.  
 "A Memory." No. 2, Three little  
 Songs.  
 "Let Us Forget." No. 3, Three  
 little Songs.
- WILLIS, M. B.  
 "Love's Solace."
- WOODMAN, R.  
 Mr. Dream Maker.

## Junior Singing.

## High Voice.

## List (a)—

- ABT, FR.**  
 "Sweet Dream."  
 "Still as the Night."  
 "Not a Sparrow Falleth."
- ARNE, T. A.**  
 "Where the Bee sucks."  
 "Blow, blow, thou winter Wind."
- BACH, F. W.**  
 "Each Blade is wet" (Klein Hälmelein wächst).
- BENNETT, STERNDALÉ**  
 "May Dew."  
 "To Chloe" (in sickness).
- BRAHMS, J.**  
 "Wiegenlied," op. 49, No. 4.  
 "Sandmännchen."
- CHOPIN,**  
 "The Maiden's Wish."
- FRANZ, R.**  
 "Gute Nacht," op. 5, No. 7.  
 "Er ist gekommen," op. 4, No. 7.  
 "Bitte," op. 9, No. 3.
- GRIEG, ED.**  
 "Heart's Melodies," op. 5, No. 1.  
 "Der Frühling" (Springtide). op. 33.
- HANDEL, G. F.**  
 "How beautiful are the feet of them  
 that preach the gospel of peace."  
 "Where'er you walk" (Semela).  
 "Great Dagon has subdued our foe"  
 (Samson).
- HAYDN,**  
 "My Mother bids me bind my Hair."
- HENSCHÉL, G.**  
 "The sunny Beam."  
 "Swiss Song."  
 "Dear Ladybird."  
 Spinning-wheel Song.  
 "To my Turtle Dove" (Old German Song).
- JENSEN, AD.**  
 "Mutter, O sing, mich zur Ruh," op. 53.
- MALLINSON, A.**  
 "The Rosebud."
- MENDELSSOHN, F. B.**  
 "Morgengruss."  
 "Winterlied."  
 "Auf Flügeln des Gesanges" (On Wings of Song).
- MOZART, W. A.**  
 "Wiegenlied."  
 Damone et Cloe (When first young Damon).

- PURCELL, H.**  
 "Fairest Isle" (King Arthur).  
 "I attempt from Love's Sickness to fly."
- RUBINSTEIN, A.**  
 "Der Traum," op. 8, No. 1.  
 "Du bist wie eine Blume."
- SCHUBERT, F.**  
 "Du bist die Ruh," op. 59, No. 3.  
 "Geheimes," op. 14, No. 2.  
 "Wohin," op. 89, No. 2.
- SCHUMANN, R.**  
 "Die Lotus Blume," op. 25, No. 7.  
 "Er, der herrlichste von allen."

## List (b)—

- AUSTIN, F.**  
 "It was a Lover and his Lass."
- BARRETT, REGINALD**  
 "Suppose."
- BEHREND, A.**  
 Nocturne.
- BEMBERG,**  
 "'Tis Snowing."
- BISHOP, H. R.**  
 "Love has Eyes."  
 "Ah! can I e'er forget thee, Love."
- BUCK,**  
 "When the Heart is young."
- CADMAN, CHAS. W.**  
 "At Dawning."
- CAPEL, J. M.**  
 "Three Fishers" (Novello).
- CHADWICK, G.**  
 "Since my Love's Eyes."
- CHAMINADE, C.**  
 "Madrigal."
- COWARD, J. M.**  
 "Christmas Bells."
- COWEN, F. H.**  
 "The Light of Stars."  
 "When the World is fair."  
 "The silent Chimes."
- DEL RIEGO, T.**  
 "Happy Song."  
 "Your Picture."  
 "The Reason."
- ELGAR, ED.**  
 "Pleading" (Novello).

FORSYTH, W. O.  
"Love took me softly by the Hand."

FRANZ,  
"Waldfahrt."

GERMAN,  
"Daffodils a' blowing."  
"Love is meant to make us glad."

HARRIS, V.  
"A madrigal."

LASSEN,  
"Thine Eyes so blue."

LESLIE, HENRY  
"Annabelle Lee."

MACDOWELL, E. A.  
"Confidence," op. 47, No. 4.  
"Thy beaming Eyes," op. 40, No. 3.  
"For sweet Love's Sake," op. 40, No. 4  
"The Robin sings in the Apple-tree,"  
op. 47, No. 1.

MACKENZIE, A. C.  
"What does little Birdie say?"  
(No. 1 in book 2 of 18 songs,  
Novello edition).

MEYER-HELMUND,  
An old-world Serenade.

NEIDLINGER,  
"The Birds are asleep."

PARRY  
"Thine Eyes still shine for me."

PHILLIPS, MONTAGU F.  
"My dreamland Rose."

RANDEGGER, A.  
"They say."  
"My Heart."

REICHART,  
"In the Time of Roses."

SANDERSON, WILFRED  
"Beyond the Dawn."  
"Spring's Awakening."

SCOTT, J. PRINGLE  
"The Secret."

STAINER, J.  
"To Leukon."  
"In thee."  
(Novello Ed.)

SOMERVILLE,  
"A Butterfly Song."

SULLIVAN, A.  
"County Guy."

TOSTI, P.  
"Mattinata."  
"Never."

VAN DER STUECKEN, F.  
"The sweetest Flower."

WHEELER,  
"You're in Love."  
"April is here."

WOODMAN,  
"An open Secret."

WYNNE, CUTHBERT  
"If thou be near."

### Low Voice.

List (a)—

ABT, FR.  
"Rose of Roses."

BEETHOVEN, L. V.  
"Nature's Adoration" (Die ehre  
Gottes aus der Natur).

BENNETT, W. S.  
"O Lord, Thou hast searched me out"  
(Woman of Samaria).  
"Maiden Mine."

BRAHMS, J.  
"Wie Melodien zieht es mir," op.  
105, No. 1.

COWEN, F. H.  
"Yet chime they so sadly" (Rose  
Maiden).

CHOPIN, F.  
"Zwei Leichen."

FRANZ, ROBT.  
"Freundschaftstücke," op. 33, No.  
10.  
"Aus meinen grossen Schmerzen,"  
op. 5, No. 1.  
"Am leuchtenden Sommermorgen,"  
op. 11, No. 2.

GAUL, A. R.  
"Eye hath not seen" (Holy City).  
"Come ye blessed" (Holy City).

GOUNOD, CH.  
"When all was young" (Faust).

GRIEG, ED.  
"Die alte Mutter," op. 33, No. 7.  
"Das Erste," op. 33, No. 8.  
"Cradle Song," op. 9, No. 2.

HANDEL, G. F.  
"Return, O God of Hosts" (Sam-  
son).  
"He shall feed his flock" (Messiah).

HULLAH,  
"Three Fishers."

LASSEN, ED.  
"Cloud and Calm."

MACDOWELL, E.  
"Folksong," op. 47, No. 3.  
"Midsummer Lullaby," op. 47, No.  
2 (Breitkopf & Härtel ed.).

MACKENZIE, A. C.  
"Spring Song."

- MALLINSON, A.  
 "The Woman and the Horse."  
 "Four by the Clock."
- RHEINBERGER,  
 "Guardian Angel."
- RUBINSTEIN, A.  
 "Die Nachtigall und die Rose," op.  
 27, No. 4.
- SCHUBERT, F.  
 "Haiden-Röslein."  
 "Der Alpenjäger."  
 "Der Lindenbaum."
- SCHUMANN, R.  
 "Allnächtlich im Träume."  
 "Im wunderschönen Monat Mai."  
 "Die Hütte."
- STAINER, J.  
 "The far-off Land" (Seven Songs,  
 No. 1, Novello).  
 "The Rose-Bush" (Seven Songs,  
 No. 2, Novello).
- SULLIVAN, A.  
 "Love not the World" (Prodigal  
 Son).
- TOSTI,  
 "Could I."
- TSCHAIKOWSKY, P.  
 "Deception," op. 65, No. 2.
- WEINGAERTNER, FELIX  
 "Wenn schlanke Lilien wandelten,"  
 op. 22, No. 2.  
 "Das Gärtlein dich verschlossen,"  
 op. 22, No. 11.  
 (Breitkopf & Härtel ed.)
- List (b)—
- AYLWARD, FLORENCE  
 "Love's Coronation."
- BANTOCK, G.  
 "In time of olde" (Six Jester Songs,  
 No. 2).  
 "Under the Rose" (Six Jester Songs,  
 No. 4).  
 (Breitkopf & Härtel ed.)
- BLUMENTHAL, J.  
 "Sunshine and Rain."
- BOHR, FRANCES  
 "Thy Will be done."
- CHAMINADE, C.  
 "Madrigal."  
 "The silver Ring."
- CLAY, F.  
 "The Sands o' Dee."
- CROOME, MAXWELL  
 "Greater and deeper."
- D'HARDELLOT, G.  
 "Three green Bonnets."
- DEL RIEGO, T.  
 "Rest thee, sad Heart."  
 "O Land of Roses."  
 "The Reason."
- GIBSON,  
 "When Love is done."
- GOETZ, ALMA  
 "Melisande in the Wood."
- HAM, ALBERT  
 "Auf nimmerwiedersehen."  
 "Darling of Mine."  
 (To count as one number.)
- HOFFMAN, H.  
 "Cradle Song" (Novello).  
 "Russian Lullaby" (Novello).
- HOMER, SYDNEY  
 "Requiem."
- HORROCKS, A.  
 "The Bird and the Rose."
- HULLAH,  
 "Three Fishers."
- JOHNSON, N.  
 "Devotion."  
 "Take thou the Rose" (Novello).  
 "Affinity."  
 "Gray Days."
- KETELBEY, A. W.  
 "My Heart a Dream" (Novello).
- KILNER, HELEN  
 "Wert thou a Slave."
- LLEWELLYN, ARTHUR  
 "Abide with me."
- LOHR, H.  
 "Out on the Deep."
- MOLLOY, J. L.  
 "Rose-Marie."
- NEEDHAM, A.  
 "An Irish Lullaby."
- NEIDLINGER,  
 "Frühlingsnacht."
- NEVIN, E.  
 "O that we Two were Maying."  
 "Serenade" (Good Night, beloved).
- SMART, H.  
 "The Lady of the Lea."
- SPROSS, GILBERT  
 "Night and Morning."  
 "I do not ask."
- SULLIVAN, A.  
 "Looking back."  
 "My dearest Heart."
- TSCHAIKOWSKY,  
 "Fifinella."
- VANNAH, K.  
 "Gray Rocks and grayer Sea."
- WEINGAERTNER, FELIX  
 "Du bist ein Kind," op. 28, No. 12.
- WHITE, M. V.  
 "When the Swallows homeward fly."

Intermediate Grade.

Soprano.

List (a)—

- |   |  |
|---|--|
| ARNE, T. A.<br>"When Love is kind."<br>"The Lass with the delicate Air."  | MOZART, W. A.<br>"Das Veilchen."<br>"Deh Vieni" (Figaro).  |
| BECKER, REINHOLD<br>"Frühlingszeit."  | PURCELL, H.<br>"Nymphs and Shepherds."   |
| BEETHOVEN, L. V.<br>"Kennst du das Land."<br>"Ich liebe dich."  | RUBINSTEIN, A.<br>"Frühlingsblick."  |
| BISHOP, H. R.<br>"Should he upbraid."   | SCARLATTI,<br>"Non dar più pene" (O pain me not)<br>Stainer edition. Novello.  |
| BRAHMS, J.<br>"Nachtigall," op. 97, No. 1.<br>"An die Nachtigall," op. 46, No. 4.<br>"We wandered."   | SCHUBERT, F.<br>"Serenade."<br>"Die Forelle," op. 32.  |
| CHOPIN, FR.<br>"Lithuanian Song."   | SCHUMANN, R.<br>"Ich kann's nicht fassen," op. 22,<br>No. 3.<br>"Aufträge," op. 77, No. 5.   |
| COSTA, M.<br>"Turn thee unto me" (Eli)  | SINDING, CHRISTIAN<br>"I heard the Gull."<br>"The Mother sings."<br>(To count as one number.)  |
| FIELITZ, A. VON.<br>"Ich weiss ein kleines Mädchen,"<br>op. 89, No. 1.<br>(Breitkopf & Härtel ed.)  | STRAUSS, R.<br>"Allerseelen."  |
| FRANZ, R.<br>"Hör, ich das Liedchen klingen,"<br>op. 5, No. 11.   | TAUBERT,<br>"In a strange Land."   |
| GOUNOD, C.<br>"Le parlote d'amor" (Faust).<br>"Serenade."   | WAGNER, R.<br>"Elizabeth's Prayer" (Tannhäuser)<br>"Elsa's Dream."   |
| GRIEG, ED.<br>"Die Prinzessin," op. 21, No. 4.<br>"Ein Schwan," op. 25, No. 2.  | WEINGAERTNER, FELIX.<br>"Nachthall," op. 22, No. 9.<br>"Motten," op. 25, No. 4.<br>"Oenothena," op. 28, No. 2.<br>(Breitkopf & Härtel ed.) |
| HANDEL, G. F.<br>"Wise Men flattering" (Judas Mac-<br>cabaeus).<br>"What though I trace each Herb<br>and Flower" (Solomon).<br>"Come unto Him." | WOLF, HUGO<br>"Gebet."<br>"Zur Ruh, zur Ruh!"  |
| HENSCHER,<br>"A Song of Flowers."<br>"The Angels dear."<br>(To count as one number.)  | List (b)—  |
| JENSEN, ADOLF<br>"Murmuring Breezes."   | ARDITI, L.<br>"Rosebuds."  |
| KJERULF, H.<br>"Last Night."<br>"Synnove's Song."   | BACH-GOUNOD,<br>"Ave Maria."   |
| MACKENZIE, A. C.<br>"Gentle Dove" (Colomba).  | BAILEY,<br>"The Carol of the Lark."  |
|   | BLUMENTHAL, J.<br>"Eventide" (Abendlied).<br>"Sleep."  |



CHAMINADE, C.

"Rest."

"L'été" (Summer).

"My Heart Sings."

CHERUBINI,

"Ave Maria."

COWEN, F. H.

"Because."

"A Birthday."

CLAY, F.

"She wandered down the mountain  
side."

DELIUS, F.

Any two. { "Indian Love-song."

{ "Cradle Song."

{ "Venevil."

{ "Spielleute."

{ "To the Queen of my Heart."

DEL RIEGO, T.

"The Waking of Spring."

DVORAK, A.

"Songs my Mother taught me."

ELGAR, E.

"Sabbath Morning at Sea."

"Come, gentle Night."

FERRARI, GUSTAVE

"The Blackbirds' Warning."

FOOTE, A.

"An Irish Folk-song."

d'HARDELOT.

"Without thee."

HAMMOND, W. G.

"Love's Springtide."

LEHMANN, L.

"Bird Songs" (any one).

LOGAN, FREDERIC KNIGHT

"Were I a Bird."

"Phyllis."

"Lift up thine Eyes."

(Any two.)

MACDOWELL.

"In the Woods," op. 47, No. 6.

MALLINSON, A.

"Apple Blossom."

"Beautiful Beatrice."

MASSENET.

"Elegy."

NEVIN, E.

"In a Bower."

PARKES, H. W.

"Love is a Sickness."

PARRY, C. H.

"My true Love hath my Heart."

PURCELL, H.

"Full fathom five."

RIES, FRANZ

"It was a wondrous Mystery," op. 31

STANGE,

"Damon."

SULLIVAN.

"To One in Paradise."

WARE, H.

"The Call of Radha."

"Hindoo Slumber-song."

WISHAW, F.

"Vainka's Song."

WILLEBY, C.

"Stolen Wings."

WRIGHT, ELLEN.

"With my Guitar."

## Contralto.

List (a)—

BACH, J. S.

"Slumber Song" (Christmas Ora-  
torio.)

BEETHOVEN,

"In questa tomba oscura."

BERLIOZ, H.

"Lamento," op. 7, No. 2.

BOHM,

"Thine only."

BRAHMS, J.

"Ständchen," op. 106, No. 1.

"Sapphische Ode," op. 94, No. 4.

COSTA, M.

"I dreant I was in Heaven" (Naa-  
man)

"The Morning Prayer" (Eli).

FRANZ, R.

"Bei der Linde," op. 36, No. 4.

"Ave Maria," op. 17, No. 1.

GRIEG, E.

"Mein Sinn ist wie der mächtige Fels,"  
op. 5, No. 4.

"Erstes Begegnen," op. 21, No. 1.

HANDEL, G. F.

"In the Battle" (Deborah).

LOEWE, C.

"The Bell-Ringer's Daughter."

MENDELSSOHN,

"Have ye not heard" (Elijah).

PARRY, C. H. H.

"The Lord is long suffering" (Judith)

SAINT-SAENS, C.  
"La Cloche."

SCHUBERT, F.  
"Auf dem Strome," op. 119.  
"The young Nun."

SCHUMANN, R.  
"Die Nonne," op. 49, No. 3.  
"Dem Helden," op. 95, No. 3.

SECCHI,  
"Luigi del Caro Bene."

STRAUSS, R.  
"Allerseelen," op. 10, No. 8.

THOMAS, A.  
"Gavotte" (Mignon).

TSCHAIKOWSKY, P.  
"None but the lonely Heart," op. 6,  
No. 6.

WEINGAERTNER, FELIX  
"Lied der Ghawazee," op. 25, No. 5.  
"Ueber ein Stündlein," op. 25, No. 6.  
"Du bist ein Kind," op. 28, No. 12.  
(Breitkopf & Härtel ed.)

WOLF, HUGO.  
"Gebet."  
"Das verlassene Mägdlein."

List (b)—

AYLWARD, FLORENCE  
"Great Lord of Life."

BANTOCK, GRANVILLE  
"Will o'-the-wisp," Jester Songs No. 4.  
"The Jester," Jester Songs No. 1.  
(Breitkopf & Härtel ed.)

BEACH, MRS. H. A.  
"Haste, O Beloved."  
"Within thy Breast."  
(To count as one number.)

BEMBERG,  
"Hindoo Song."

BIZET,  
"In the Woods" (Vieille Chanson).

BUNNING, H.  
"Sunshine and Butterfly."

CHAMINADE, C.  
"Ritournelle."

COLERIDGE-TAYLOR,  
"In Memoriam," op. 24 (any one).

DANDRIDGE, M. E.  
"Destiny."

DAVIES, WALFORD  
"Hame."

ELGAR, E.  
"Come, gentle Night."  
"Sea Slumber-song" (Sea Pictures).

GERMAN, ED.  
"Sweet Rose."

GODARD, B.  
"Berceuse" (Angels guard thee).

HAHN, R.  
"Si mes vers avaient des ailes."

HATTON, J. L.  
"The Enchantress."

HOLMES, AUGUSTA  
"Call of Spring."

LEHMANN, L.  
"The worldly Hope" (In a Persian  
Garden).

LIDDLE, S.  
"Abide with me."

MASSENET,  
"Bonne nuit."

NELSON, MURIEL  
"Hidden Dew."

(OLD FRENCH.)  
"La charmante Marguerite."

PARRY,  
"Of all the Torments."

RONALD, LANDON  
"April's here" (Six love-songs, No. 1).  
"Have you forgotten" (Six love-songs,  
No. 2).  
"O lovely Night."

STANFORD, C.  
"Blue Wings."

STEPHENS, WARD  
"My Shadow."

SULLIVAN, A.  
"Let me dream again."  
"The Willow Song."

THOMAS, A. GORING  
"A Summer Night."

TOSTI, P.  
"Serenade."

TOURS,  
"Because of thee."

WEINGAERTNER, FELIX  
"Geubtes Herz."  
"Ich fürcht nicht Gespenster."  
(One number.)

WOODFORDE-FINDEN, A.  
"The temple Bells."  
"Less than the Dust."

WOOLER, ALFRED  
"Consider and hear me."  
"Hear my Cry."

## Tenor.

## List (a)—

BARNBY, J.

"The soft southern Breeze"  
(Rebeckah,

BRAHMS, J.

"Wir wandelten."  
"Vergebliches Ständchen," op. 84, No. 4.

DVORAK, A.

"Gute Nacht."  
"Biblical Songs," No. 4.  
"Biblical Songs," No. 5.

FIELITZ, A. VON.

"Rausch," op. 89, No. 2  
"Hinterm Rathaus," op. 89, No. 4.  
(Breitkopf & Härtel ed.)

FLOTOW,

"Like a Beam from above" (Martha),

FRANZ, R.

"In Herbst," op. 17, No. 6.  
"Marie," op. 18, No. 1.

GRIEG, ED.

"Ein Traum," op. 48, No. 6.  
"Mein Ziel," op. 33, No. 12.  
"Ragna," op. 44, No. 5.

HANDEL, J.

"Sound an Alarm" (Judas Macca-  
baeus).  
"How vain is Man" (Judas Macca-  
baeus).

LISZT,

"I cherish thee."

MASSENET,

"Sonnet payen" (Pagan Sonnet).

MENDELSSOHN, F.

"He counteth all your Sorrows"  
(Lobgesang).  
"Der Blumenkranz."

SCHUBERT, F.

"Mein," op. 25, No. 11.  
"Wo ist Sylvia," op. 106, No. 4.

SCHUMANN, R.

"Der Spielmann," op. 40, No. 4.

SIBELIUS, JEAN

"A Maiden yonder sings," op. 50,  
No. 3.  
"The silent Town," op. 50, No. 5.

STAINER, J.

"Quand je te vois" (No. 6, Seven  
Songs, Novello's edition).

THOMAS, A. GORING

"Ma voisine" (my neighbor).  
"The Willow."

VERDI, G.

"La donna è mobile" (Rigoletto).

WEINGAERTNER, FELIX

"Schifferliedchen," op. 22, No. 6.  
"Ich denke oft ans blaue Meer," op.  
27, No. 2.  
"Spielmannslied," op. 28, No. 9.  
(Breitkopf & Härtel ed.)

WOLF, H.

"Der Gärtner."  
"Wenn du zu den Blumen gehst."

## List (b)—

ALLITSEN, F.

"An old English Love-song."

ARDITI, L.

"Let me love thee."

BALFE.

"Good night, Beloved."

BEACH, MRS. H.

"Empress of the Night."  
"Exaltation."

CHADWICK.

"The Danza."

CLAY, F.

"I'll sing thee Songs of Araby."

COLERIDGE-TAYLOR, S.

"Eleanore."

COWEN, F. H.

"Love me if I live."

DAVIES, J. D.

"Good-night."

ELGAR, E.

"The Swimmer."  
"After."

GOULD, MONK

"Molly dear."

HOLMES, A.

"An Irish Noel."

LEONCAVALLO, RUGGIRO

"Maddinata."

MALLINSON, A.

"Violet."  
"Autumn"  
"Alone in the Wood."  
(Waldeinsamkeit.)

MASSENET,

"Ouvre tes yeux bleus."

MERZ, OTTO

"When Mildred Sings."

MEYER-HELMUND,

"Gondolier's Song."

NORWEGIAN FOLK-SONG,

"Old Bridget."

PAPINI, G.

"Morire."

RONALD, L.

"A Smile."  
"If I might love you."

SALAMAN.

"I arise from Dreams of thee."

STANGE,  
"Gretula."

SULLIVAN, A.  
"The Sailor's Grave."

TOSTI, P.  
"Ricordati di me."

TOURS, B.  
"Mother o' Mine"  
"Stars of the summer Night."

# Baritone and Bass.

## List (a)—

BENEDICT, J.  
"How great, O Lord!" (St. Peter).

BRAHMS, J.  
"Der Tod, das ist die kühle Nacht," op.  
96, No. 1.

CACCINI.  
"Amarilli."

COSTA, M.  
"If thou shouldst mark Iniquities"  
(Eli).

DVORAK, A.  
"Biblical Songs," No. 4.  
"Biblical Songs," No. 5.

FAURE,  
"The Palms."

FRANZ, R.  
"Abends," op. 16, No. 4.  
"Die Rose, die Lilie," op. 34, No. 5.

GOUNOD.  
"The King of Love."  
"There is a green Hill."

GRIEG, E.  
"Des Dichters Herz," op. 5, No. 2.  
"Ich liebe dich," op. 5, No. 3.

HANDEL, G. F.  
"Pluck Root and Branches"  
(Esther).

HAYDN, J.  
"Rolling on foaming Billows" (Crea-  
tion).  
"With Joy, the impatient Husband-  
man" (The Seasons).

LISZT, F.  
"Es muss ein Wunderbares sein."

LOEWE, C.  
"Heinrich der Vogler," op. 56, No. 1.

MALLINSON, A.  
"Eldorado."  
"Slow, Horses, slow."

MASSENET, J.  
"Dors, Ami!"

MENDELSSOHN, F.  
"It is enough" (Elijah).  
"O God, have mercy" (St. Paul).

MOZART, W. A.  
"If you would dance" (Se vuol bal-  
lare) (Figaro).  
"Possenti numi" (O Isis, etc.) (Ma-  
gic Flute).

SCHUBERT, F.  
"Resting Place" (Aufenthalt).  
"Krieger's Ahnung."

SCHUMANN, R.  
"Ich grolle nicht."  
"Die beiden Grenadiere."

THOMAS, A. GORING  
"Le Baiser" (A Memory).

TSCHAIKOWSKY, P.  
"Pilgrims' Song."

WEINGARTNER, FELIX  
"Nelken," op. 28, No. 3.  
"Auf einem verfallenen Kirchhofe,"  
op. 28, No. 5, (To count as one  
number.)  
"Guter Rat," op. 28, No. 6.  
"Schuhmacherlied," op. 28, No. 8.  
(Breitkopf & Härtel ed.)

WOLF, HUGO  
"Gebet."  
"Gesang Weyla's."  
"Wer sich der Einsamkeit ergibt."

## List (b)—

ADAM,  
"Cantique de Noël."

ALLITSEN, F.  
"The Lute-player."  
"Margaret."  
"Come not when I am dead."  
"Prince Ivan's Song."  
6 Songs (Ascherberger ed.).

BANTOCK, GRANVILLE  
"Will-o'-the-wisp." Jester Songs, No.  
3.  
"The Jester," Jester Songs, No. 1.  
(Breitkopf & Härtel ed.)

BEACH, MRS. H.  
"Arietta."  
"With Violets."  
"Good Morning" and "Good Night."

BENEDICT, J.  
"Rage, thou angry Storm."

COWEN, F. H.  
"The Seasons."

DIX, J. AIRLIE  
"Egyptian Love-song."

ELGAR, E.  
"Like to the damask Rose."  
"A War Song."

- GERMAN, ED.  
 "Three Baritone Songs" (any two)  
 (Boosey ed.).  
 "Rolling down to Rio" (Novello ed.).
- HENSCHER, G.  
 "Young Dietrich."
- HUHN, BRUNO  
 "Invictus."
- HUSSELL, ALLEN T.  
 "The riderless Steed."
- KORBAY, F.  
 "There's on Earth" (Hungarian Song).
- MACFARREN,  
 "The Linnet Song."
- MALLINSON, A.  
 "Eleanore."  
 "Over the Western Sea."
- NEEDHAM, A.  
 "My Irish Wife."
- NELSON, HERBERT H.  
 "Wolf of the Bowman."
- QUILTER, ROGER  
 "Come away, Death."  
 "O Mistress Mine."  
 "Blow, blow, thou winter Wind."  
 3 Shakespeare Songs (Boosey ed.).
- RONALD, LANDON  
 "My Realm of Love."
- SARJEANT, J.  
 "Blow, blow, thou winter Wind."
- SOMERVELL, A.  
 "Birds in a high hall Garden."  
 "Go not, happy Day."  
 "Oh, let the solid Ground."  
 ("Maud" Cycle.)
- SQUIRE, W. H.  
 "The Irish Fusilier."
- STANFORD, C. V.  
 "Drake's Drum."  
 "The old Superb."
- WALLACE, WM.  
 "Song of Mine."  
 "Minnie Song" (Freebooters' songs.).
- WALTHER, R. H.  
 "When my Baby sings."
- WILLIAMS, R. VAUGHAN  
 "The Vagabond."  
 "Bright is the Ring of Words."  
 Songs of Travel (Boosey ed.).

**Recitative.****Soprano.**

- HANDEL,  
 "And the Angel said unto them"  
 (Messiah).
- "No more in Zion" (Judas Macca-  
 baeus)  
 "Blest be the Lord" (Solomon).

**Contralto.**

- COSTA,  
 "Weep not, my Mother" (Naaman)
- MENDELSSOHN,  
 "Now Cherith's Brook is dried up"  
 (Elijah).
- HANDEL,  
 "Great Prophetess" (Deborah).

**Tenor.**

- HANDEL,  
 "My Arms! against the Gorgias will  
 I go" (Judas Maccabaeus).  
 "Thanks to my Brethren" (Judas  
 Maccabaeus).
- HAYDN,  
 "And God created Man" (Creation)

**Bass.**

- HANDEL,  
 "I'll hear no more" (Esther).  
 "Be comforted" (Judas Maccabaeus)
- HAYDN,  
 "At last the bounteous Sun" (The  
 Seasons).



**ORGAN.**

**Junior Grade.**

Candidates must be prepared to play eight compositions selected from the following list. One number, at least, must be chosen from the list of pieces by Bach, the candidate being permitted the freedom of choice in the remaining seven pieces. One number must be prepared without teacher's assistance:—

**BACH, J. S.**  
Eight short Preludes and Fugues  
(Peters' edition, vol. 8), any two.  
Prelude and Fugue in C minor (Peters'  
edition, vol. 4, No. 6).  
Prelude and Fugue in E minor (Peters'  
edition, vol. 3, No. 10).  
Prelude and Fugue in G minor and  
major (Peters' edition, vol. 8, Nos.  
11 and 12).  
Fantasia in C minor (Peters' edition,  
vol. 4, No. 12).  
Canzona in D minor (Peters' edition,  
vol. 4, No. 10).  
Allabreve in D (Peters' edition, vol. 8,  
No. 6).

**BACHE, F. E.**  
Introduction and Allegro in D.

**BAIRSTOW, E. C.**  
Scherzo in A flat.

**BUCK, DUDLEY**  
"At Evening."

**BUESSER, HENRI**  
Marche de Fête, op. 36 (Durand et Fils  
edition).

**CALKIN, J. BAPTISTE**  
Andante con moto, op. 101.  
Festival March, op. 80.

**D'EVRY, E.**  
Meditation (Lemare's Recital Series.  
No. 13).

**DESHAYES,**  
Prelude in D (Schirmer).

**DUBOIS, TH.**  
Marche de Procession in D.  
Cantilene Nuptiale in A flat.  
Toccata in G.

**GIGOUT, E.**  
Marche Religieuse in E flat.

**GUILMANT, A.**  
Marche triumphale in E flat, op. 34  
(Novello edition).  
Canzona in A minor, op. 40.  
Allegretto in B minor, op. 19.  
Cantilene pastorale in B minor, op. 15.  
Prière et Berceuse, op. 27.

**HANDEL-THORLEY, W.**  
Grand Choeur in D, op. 18.  
Canzone (Durand et fils ed.).

**HAILING, R. G.**  
Chanson de Joie.

**HOLLINS, ALFRED**  
In Springtime.  
Berceuse.  
Spring Song.

**HOPKINS, ED. J.**  
Adagio cantabile in D (Weekes' ed.)

**KARG-ELERT, S.**  
Choral Improvisationen, op. 65, Nos.  
16, 33, 44, 45, 59, any two.

**LEMARE, E. H.**  
Chant sans paroles.  
Gavotte Moderne.  
Spring Song (From the South).  
Souvenir.  
Traumlied.  
Liebestraum.  
Romance in D flat.

**LEMMENS, J. N.**  
Prayer in E.  
Marche Triumphale in D.  
Finale in D.

**MERKEL, GUSTAV**  
Prelude in E flat, op. 100, No. 1.  
Postludium in D.  
Pastorale in G.  
Fantasia in E minor, op. 133.  
Overture in C.

**MENDELSSOHN, F. B.**  
Prelude and Fugue in G, No. 2.  
Sonata in C minor, No. 2.  
Sonata in D, No. 5.

**NEWTON, ERNEST**  
Duettino in G.

**REA, WM.**  
Three Organ pieces (any one). Augener  
edition, No. 8771.

**RHEINBERGER, JOS.**  
Twelve Trios, op. 189 (any one).  
Twelve Characteristic Pieces, op. 156  
(any one).

**RINCK,**  
Postlude in F major, Organ School, Bk.  
V., No. 3.

**SAINT-SAENS,**  
Communion in E, op. 13.

## SALOME, TH.

Cantilene in A minor.  
Offertoire in D flat.  
Grand Choeur in A.

## SILAS, E.

March in B flat, op. 95, No. 2.  
Meditation in a Cathedral, op. 95,  
No. 5.

## SMART, HENRY

Andante Grazioso in G.  
Moderato in D.  
Six short and easy Pieces (any one).  
Novello's edition.  
Three Andantes in C, F, A; any one.

## TOURS, B.

Allegretto Grazioso.  
Minuet and Trio in G.  
Fantasia in C.

## WEST, J. E.

Three Preludes (2nd ser). Any two  
Novello's edition.

## WESLEY S. S.

Larghetto with variations in F sharp  
minor.  
Andante in E flat (2-4 time).  
Andante in G (3-4 time).

## WHEELDON, H. A.

Cantilene (Lemare Recital Series).  
Berceuse in G.

## WOLSTENHOLME, W.

Andantino (Lemare Recital Series).  
Canzona (Lemare Recital Series).  
Le Carillon.  
The Question and The Answer.  
(Any one.)

Candidates must also be prepared to play at sight a simple chant or hymn tune as may be required by the examiner; to transpose at sight a simple chant; play at sight a simple organ composition, and to answer questions on pitch and character of stops, and registration, etc. There will also be an ear test on the major, minor and perfect intervals within the octave.

### Junior Organ Certificate.

Successful candidates in the Junior Organ Examination who have passed the Junior Theory Examination, will receive the Junior Organ Certificate of the University.

Marks will be awarded under the following heads in the Junior Organ Examination:—

	MAXIMUM.
Accuracy as to notes, rests, etc.,	10
Independence of action between hands and feet,	8
Touch—legato, clear part-playing, etc.,	12
Choice and management of stops,	6
Phrasing,	12
Strictness and choice of tempo,	10
Musicianship in general requirements and self studied piece	12
Sight playing,	6
Hymn playing,	6
Transposition,	6
Ear test,	6
Questions on organ, stops, etc.,	6

For particulars as to fees, see page 605

# Intermediate Grade.

Candidates must be prepared to play eight compositions selected from the following list. One number, at least, must be chosen from the list of pieces by Bach, and one must be by Mendelssohn—the candidates being allowed freedom of choice in the remaining six pieces. One number must be prepared without the teacher's assistance:—

- |   |   |
|---|---|
| <p><b>BACH, J. S.</b><br/> Sonata in E flat, No. 1, Peters' edition vol. 1.<br/> Sonata in D minor, No. 3, Peters' edition, vol. 1.<br/> Concerto in G. No. 1, Peters' edition, vol. 8.<br/> Prelude and Fugue in G, No. 2, Peters' edition, vol. 2.<br/> Prelude and Fugue in A minor, No. 8, Peters' edition, vol. 2.<br/> Prelude and Fugue in C, No. 1, Peters' edition, vol. 2.<br/> Prelude and Fugue in E flat (St. Ann's) No. 1, Peters' edition, vol. 3.<br/> Prelude and Fugue in D. No. 3, Peters' edition, vol. 4.<br/> Toccata and Fugue, D minor, No. 4, Peters' edition, vol. 4.<br/> Choral Prelude in A (4-4 time) Novello, O.C. 318. (Allein Gott in der höh' sei ehr.)<br/> Choral Prelude in G (6-8 time) Novello, O.C. 310.<br/> Choral Prelude (Wachet auf). Novello O.C. 356.</p> <p><b>BERENS, HERMANN</b><br/> Fantasia in C minor. Augener's edition, No. 8722.</p> <p><b>BOROWSKI, FELIX</b><br/> Sonata, No. 1 in A minor.<br/> Suite No. 1 in E minor. Laudy ed.</p> <p><b>BOELLMANN, L.</b><br/> Suite Gothique.</p> <p><b>BRAHMS, J.</b><br/> 11 Choral Preludes, Nos 1, 2 and 3 8<br/> 9, 10 and 11. Simrock ed</p> <p><b>BREWER, A. HERBERT</b><br/> Triumphal Song.</p> <p><b>BUCK, DUDLEY</b><br/> Sunshine and Shadow, from our tone Pictures.<br/> Holy Night, from four tone Pictures.</p> <p><b>FRANCK, C.</b><br/> Pastorale in E, op. 19, No. 4.<br/> Three pieces, Fantasia, Cantabile, Piece heroique; any one.</p> <p><b>FREYER, H.</b><br/> Concert Fantasia in F minor.</p> | <p><b>FRICKER, H. A.</b><br/> Concert overture in C minor.</p> <p><b>GADE, N.</b><br/> Three Pieces. (Any one.) Augener ed. 8704.</p> <p><b>GUILMANT, A.</b><br/> Marche sur un thème de Handel, op. 15<br/> Légende and Final Symphonique, op. 71.<br/> Finale, Grand Choeur in E flat, op. 40.<br/> Marche Funèbre and Chant Seraphique, op. 17.<br/> Fantasia sur deux Mélodies Anglaises, op. 43.</p> <p><b>HANDEL-BEST,</b><br/> Six Concertos, Nos. 2, 3, 5 (any one).</p> <p><b>HARWOOD, BASIL</b><br/> Requiem Aeternam.</p> <p><b>HESSE, A.</b><br/> Prelude and Fugue in D minor, op. 66 (Augener).<br/> Variations on an original theme in A flat.<br/> Variations on an original theme in A. Toccata in A flat.</p> <p><b>HOLLINS, ALFRED</b><br/> Overture in C minor.<br/> Intermezzo in D flat.<br/> Triumphal March.</p> <p><b>HOPKINS, ED. J.</b><br/> Allegro Finale in A (Jubilee).<br/> Andante Grazioso.<br/> Allegro Moderato in A (Weekes' ed.).</p> <p><b>HOYTE, W. S.</b><br/> Scherzo in B flat.</p> <p><b>JOHNSON, BERNARD</b><br/> Two Duologues (both).</p> <p><b>KARG-ELERT, SIGFRID</b><br/> Trois Impressions, op. 72 (any one).<br/> Choral Improvisationen, op. 66 Nos. 12, 38, 47 (any one).</p> <p><b>LEMARE, E. H.</b><br/> Marche Solennelle<br/> Rêverie, op. 20.<br/> Pastoral Poem. op. 54</p> |
|---|---|

- LEMMENS, J. N.**  
Fantasia in A minor (Schirmer).  
Hosannah; Ite missa est; Sonata Pontificale.
- LLOYD, C. H.**  
Sonata in D minor. Novello.
- MACPHERSON, CHAS.**  
Fantasy Prelude. Novello.
- MENDELSSOHN, F. B.**  
Sonatas, Nos. 3, 4, 6 (any one).  
Prelude and Fugue in D minor, No. 2.
- MERKEL, GUSTAV**  
Sonata, No. 5, D minor, op. 148.  
Sonata, No. 6 E minor. op. 148.  
Adagio in E, op. 35. Augener ed. 8706.
- MORANDI, E.**  
Overture in E minor.
- PIUTTI.**  
Sechs Stücke, op. 11 (any one).
- RAFF, J.**  
Introduction and Fugue in E minor.  
Augener ed, 8702.
- REGER, MAX.**  
3 Organ Pieces, op. 7, any two, Augener ed. 5825.
- RHEINBERGER, J.**  
Fantasia Sonata in A flat, No. 2.  
Augener ed. 8701.  
Pastoral Sonata in G, No. 3.  
Sonata in A minor, No. 4.  
Sonata in F sharp minor, No. 5.  
Monologues, op. 156 (any two).  
Twelve Pieces, op. 174 (any two).
- SAINT-SAENS, C.**  
Elevation in E.  
Benediction Nuptiale.  
Fantasia in E flat.  
Prelude and Fugue in B, op. 90, No.
- SCHUMANN, R.**  
Six Studies, op. 56 (any two).
- SILAS E.**  
Fantasia on St. Ann's Tune.
- SMART, H.**  
Postlude in D. Novello.  
Andante E minor. Novello.  
Andante in G. Novello.  
Solemn March in E flat.  
Con moto en forme d'overture. Ash-down.
- STEWART, R. P.**  
Concert Fantasia in D minor. Novello.
- WESLEY, S. S.**  
Choral Song and Fugue.  
Andante in F.
- WEST, J. E.**  
Song of Triumph. Novello.  
Festal Commemoration. Novello.  
"O Filii" with variations. Novello.
- WIDOR, C. M.**  
First Symphony (Marche Pontificale Intermezzo, Finale)  
Second Symphony (Salve Regina, Pastorale, Finale).
- WILLAN, HEALEY**  
Prelude and Fugue in C minor.
- WOLSTENHOLME, W.**  
Cantilene in A flat.  
Sonata in style of Handel.  
Festival Toccata in B flat

Candidates must be prepared to play at sight, and with appropriate registration, several verses of a hymn tune or choral; to play at sight an organ composition; to transpose a hymn tune or choral into any key required within the compass of a third, above or below, to answer questions on organ construction and registration, etc., and to pass an ear test on any interval within the octave.

### Intermediate Organ Certificate.

Successful candidates in the Intermediate Organ Examination, who have passed the Intermediate Examination in Theory, will receive the Intermediate Organ Certificate of the University.

Marks will be awarded under the following heads in the Intermediate Organ Examination:—

	MAXIMUM.
Accuracy as to notes, rests, etc.	10
Independence of action between hands and feet,	8
Touch—legato, clear part-playing, etc.,	12
Choice and management of stops,	8
Phrasing,	12
Strictness and choice of tempo,	10
Musicianship in general requirements and self-studied piece,	12
Sight playing,	6
Hymn playing,	6
Transposition,	6
Ear test,	6
Questions on organ, stops, etc.,	6
For particulars as to fees, see page 605	



**VIOLIN.****Primary Grade.**

NOTE.—Candidates must bring their own accompanist, their teachers being permitted to act as such. Candidates are also requested to have their strings, pegs, and bows in perfect condition.

Candidates will be required to prepare six studies, and four pieces chosen from the following list, one piece being selected from each group:—

**Studies.****DONT,**

Op. 38 Twenty Exercises.

**Pieces.****Group No. 1:—****DANCLA,**

Six airs variés, op. 89 (any one).

**CORELLI,**One "Sarabande," one "Gavotte,"  
and one "Gigue" (these three being  
considered as one number). Use  
Litolf edition.**HENRY, J. HAROLD**

Mazurka.

**BOROWSKI,**

Adoration.

**DOELB, WILHELM**

Bolero, op. 44, No. 2.

**Group No. 2:—****HANDEL,**

Bourrée (Classic Pieces, Peters).

**MOZART,**

Menuetto (Classic Pieces, Peters).

**BACH,**

Loure (Classic Pieces, Peters).

**GABRIEL-MARIE,**

La Cinquantaine.

**GILLET,**

Passepiéd.

**BOCCHERINI,**

Menuetto.

**GLUCK,**

Gavotte from Don Juan.

**DITTERSDORF,**

Deutscher Tanz (Burmester).

**Group No. 3:—****GLUCK,**

Andante (Classic Pieces, Peters)

**BACH,**

Sarabande (Classic Pieces, Peters)

**TARTINI,**

Adagio (Classic Pieces, Peters).

**HUMMEL,**

Romance (Classic Pieces, Peters)

**HANDEL,**

Largo (Classic Pieces, Peters)

**HAYDN,**

Serenade.

**SCHUBERT,**

Pregiera.

**SCHUMANN,**

Träumerei.

**Group No. 4:—****HUSSLA,**

Barcarolle.

**SEITZ,**

Menuett.

**HENRY, J. HAROLD.**

Valsette.

**WARNER, H.**

Allegretto Grazioso.

**PAPINI,**

Romanze in F.

**BOHM,**

Moto perpetuo (in D).

**BOROWSKI,**

Berceuse.

**STEARNS, C. C.**

Serenade.

**BUSCH, CARL**

The Top.

**HERRMANN, TH.**

Serenade, op. 77.

N.B.—Candidates are advised to memorize as much as possible of their work.

**Technical Tests, etc.**

Candidates must be prepared to play (from memory) all the major scales and all the minor scales (both melodic and harmonic forms) through two octaves.

**Sight Reading.**

Candidates will be required to play at sight a simple piece in the first three positions.

**Primary Violin Certificate.**

Successful candidates in the Primary Violin Examination will be awarded the Primary Violin Certificate of the University.

For particulars as to fees, see page 605.

Marks will be awarded under the following heads in the Primary Violin Examination:—

	MAXIMUM.
Position,	12
Purity of intonation,	12
Tone—quality and volume,	12
Technique, left hand,	12
Technique, bowing,	12
Accuracy of notation in both bow and finger markings,	10
Style, conception (natural qualifications),	10
Memory,	10
Sight reading,	10

### Junior Grade.

NOTE.—Candidates must bring their own accompanist, their teachers being permitted to act as such. Candidates are also requested to have their strings, pegs, and bows in perfect condition. Candidates will be required to prepare six studies, and six pieces chosen from the following list, one piece being selected from each group.

### Studies.

**KREUTZER,**  
42 studies (Hermann or David edition  
preferred). Any six studies taken

from these between No. 2 and  
No. 30.

### Pieces.

#### Group No. 1 :—

**DE BÉRIOT,**  
Scène de Ballet (Bolero, or Tempo di  
Valse).  
Air Varié No. 6 or No. 7.

**RODE,**  
7th Concerto (1st or 3rd movement).  
Air Varié in G (David).

**BACH,**  
Concerto in A minor (1st or 3rd move-  
ment).  
Concerto in E 1st or 3rd movement).

#### Group No. 2 :—

**VIEUXTEMPS,**  
Rêverie.

**ERNST,**  
Elégie.

**SPOHR,**  
Barcarole.

**HOLLAENDER,**  
Spinning Song.

**BOHM,**  
Cavatina.

**RAFF,**  
Cavatina.

#### Group No. 3 :—

**WIENIAWSKI,**  
Mazurkas (any one).

**DVORAK,**  
Indian Canzonetta.

**RIES,**  
Barcarolle (op. 34).

**RAMEAU,**  
Rigaudon (Burmester).

#### Group No. 4 :—

**BACH,**  
Air on G string.

**BORNSCHEIN,**  
Rêverie Tristesse.

**GODARD,**  
Berceuse from Joselin.

**ARNOLD, G. W.**  
Meditation.

**SIMON,**  
Berceuse.

**SITT,**  
Barcarole.

**SCHUMANN,**  
Evening Song (Joachim).

**RIES,**  
Barcarole from Suite in G.

#### Group No. 5 :—

**HANDEL**  
Sonatas (any one).

**SCHUBERT,**  
Sonatinas (any one).

**MOZART,**  
Sonatas (any one).

#### Group No. 6 :—

**DVORAK,**  
Humoreske (Kreislér).

**SINDING,**  
Prelude (op. 43).

**HUSS, HENRY HOLDEN**  
Romance in E.

GOSSEC,  
Gavotte.

D'AMBROSIO,  
"Waltz."

MOZART,  
Deutscher Tanz.

DEBEFVE,  
Berceuse (G major).

DRDLA,  
Souvenir.  
Serenade.

N.B.—Candidates are advised to memorize as much as possible of their work.

### Technical Tests, etc.

Candidates must be prepared to play from memory all major scales also all minor scales (melodic and harmonic forms) through three octaves; also all major scales in thirds, sixths and octaves; compass—one octave only.

### Sight Reading.

Candidates will be required to play at sight a piece of moderate difficulty.

### Junior Violin Certificate.

Successful candidates in the Junior Violin Examination, who have passed the Junior Theory Examination, will be awarded the Junior Violin Certificate of the University.

Marks will be awarded under the following heads in the Junior Violin Examination:—

	MAXIMUM.
Tone—quality and volume,	15
Technique, left hand,	15
Technique, bowing.	15
Rhythm, choice of tempo, phrasing, etc.,	15
Style, emotion, brilliancy (natural qualifications),	15
Sight reading,	15
Memory,	10

For particulars as to fees, see page 605.

**Intermediate Grade.**

**NOTE.**—Candidates must bring their own accompanist, their teachers being permitted to act as such.

Candidates will be required to prepare six studies and seven pieces chosen from the following list, one piece being selected from each group:—

**Studies.**

- |   |                              |
|---|------------------------------|
| <b>KREUTZER,</b><br>42 studies (the exercises in double<br>stopping). | <b>RODE,</b><br>24 Caprices. |
|---|------------------------------|

**Pieces.**

- |   |   |
|---|---|
| <b>Group No. 1:—</b>  | <b>VIOTTI</b><br>Adagio from 22nd Concerto (David).     |
| <b>DE BERIOT,</b><br>Concertos (any one, complete).   | <b>MOZART,</b><br>Adagio from Concerto in A (David).    |
| <b>MOZART,</b><br>Concertos (2 movements from any<br>one).  | <b>BRUCH,</b><br>Adagio from Concerto in G minor.       |
| <b>VIOTTI,</b><br>22nd Concerto (1st or 3rd movement).  | <b>MENDELSSOHN,</b><br>Andante from Concerto in E minor |
| <b>KREUTZER,</b><br>Concertos (13th or 19th complete).  | <b>Group No. 4:—</b>                                    |
| <b>Group No. 2:—</b>  | <b>WIENIAWSKI,</b><br>Valse caprice.                    |
| <b>WIENIAWSKI,</b><br>Legende.  | <b>HUBAY,</b><br>Hejra Kati.                            |
| <b>RIES,</b><br>Adagio from Suite in G.   | <b>D'AMBROSIO,</b><br>Romanze.                          |
| <b>BEETHOVEN,</b><br>Romance in G.<br>Romance in F.   | <b>VIEUXTEMPS,</b><br>Fantasie caprice.                 |
| <b>BOHM,</b><br>Legende.  | <b>ZARZYCKI,</b><br>Mazurka.                            |
| <b>BRUCH,</b><br>Kol Nidrey.  | <b>VIEUXTEMPS,</b><br>Ballade e Polonaise.              |
| <b>GODARD,</b><br>Adagio from Concerto in A minor.<br>Adagio pathetic.                                | <b>MENDELSSOHN,</b><br>Andante (from Concerto).         |
| <b>GOLDMARK,</b><br>Andante from Concerto.  | <b>LEONARD,</b><br>Souvenir de Bade.                    |
| <b>BROCKWAY,</b><br>Romance, op. 31, No. 3.   | <b>WILHELMJ, A.</b><br>Ballade, op. 40.                 |
| <b>Group No. 3:—</b>  | <b>DRDLA, F.</b><br>Polichinelle, op. 41.               |
| <b>SPOHR,</b><br>Adagio from 9th Concerto.<br>Adagio from 11th Concerto.<br>Adagio from 7th Concerto. | <b>Group No. 5:—</b>                                    |
|   | <b>RIES,</b><br>Suite in G (moto perpetuo).             |



HAUSER,  
Hungarian Dances.

LECLAIR,  
Tambourine.

SCHUBERT,  
L'abeille.

PAGANINI,  
Moto perpetuo.

VIEUXTEMPS,  
Tarantelle, op. 22, No. 5.

HUBAY,  
The Butterfly.

Group No. 6. :—

RUST,  
Sonata in D minor.

LECLAIR,  
Sonatas (David), any one.

NARDINI,  
Sonatas (David), any one.

BEETHOVEN,  
Sonatas Nos. 1, 2, 4, 5 (any one).

GADE,  
Sonatas (any one).

BACH,  
Sonatas for Violin Solo, any two movements.

Group No. 7 :—

MASSENET,  
Crépuscule (Hubay).

FLOERSHEIM  
Idylle.

TSCHAIKOWSKI,  
Sérénade Mélancolique.

MASSENET,  
Méditation de Thais.

DEBUSSY,  
En Bateau.  
Menuet.

PAPINI,  
"Contemplation."

SARASATE,  
Miramar, op. 42.

### Technical Tests, etc.

Candidates must be prepared to play from memory the major and minor scales in thirds, sixths and octaves through two octaves, also arpeggios in octaves (compass two octaves).

Technic of the Bow.

### Sight Reading.

Candidates will be required to play at sight one slow and one quick movement of moderate difficulty.

### Intermediate Violin Certificate.

Successful candidates in the Intermediate Violin Examination, who have passed the Intermediate Theory Examination, will be awarded the Intermediate Violin Certificate of the University.

Marks will be awarded under the following heads in the Intermediate Violin Examination:—

	MAXIMUM.
Tone—quality and volume.	15
Technique, left hand.	15
Technique, bowing.	15
Individuality, style and natural qualifications.	15
Interpretation, choice of tempo, phrasing, etc.	15
Sight reading.	15
Memory.	10

For particulars as to fees, see page 58

**VIOLONCELLO.****Primary Grade.**

NOTE.—Candidates must bring their own accompanist, their teachers being permitted to act as such. Candidates are also requested to have their strings, pegs and bows in perfect condition.

Candidates will be required to prepare fifteen studies and four pieces chosen from the following list, one piece being selected from each group:—

**Studies.**

LEE, SEBASTIAN  
Op. 31, 40 Exercises.

**Pieces.****Group No. 1 :—**

GABRIEL-MARIE,  
La Cinquantaine.

LEE, SEBASTIAN  
Gavotte, op. 112.

**Group No. 2:—**

GOLTERMAN, GEORGE.  
Andante (from A minor Concerto).

SCHUMANN,  
Träumerei.

POPPER,  
Wiegenlied.

THOME, FRANCIS  
Simple Aveu.

GODARD,  
Berceuse.

FISHER,  
Romance.

**Group No. 3 :—**

MASSENET,  
Elegie.

WAGNER,  
Evening Star

GABRIEL-MARIE,  
Lamento.

MENDELSSOHN,  
Spring Song.

GILLET,  
Madrigal.

**Group No. 4 :—**

BURGMUELLER  
3 Nocturnes.

GOLTERMAN,  
Romance.  
Le Rêve.

DUNKLER,  
Rêverie.

RUBINSTEIN,  
Melody in F.

NOTE.—Candidates are advised to memorize as much as possible of their work.

**Technical Tests, etc.**

Candidates must be prepared to play from memory all major and the melodic minor scales through two octaves.

**Sight Reading.**

Candidates will be required to play at sight a simple piece in the four first positions.

**Primary Violoncello Certificate**

Successful candidates in the Primary Violoncello Examination will be awarded the Primary Violoncello Certificate of the University.

For particulars as to fees, see page 605

Marks will be awarded under the following heads in the Primary Violoncello Examination:—

	MAXIMUM.
Position,	12
Purity of intonation	12
Tone—quality and volume,	12
Technique, left hand	12
Technique, bowing.	12
Accuracy of notation in both bow and finger markings,	10
Style, conception (natural qualifications).	10
Memory.	10
Sight reading	10

**Junior Grade.**

**NOTE.**—Candidates must bring their own accompanist, their teachers being permitted to act as such. Candidates are also requested to have their strings, pegs and bows in perfect condition.

Candidates will be required to prepare six studies and six pieces chosen from the following list, one piece being selected from each group:—

**Studies.**

GRUETZMACHER,  
Op. 38.

MERCK,  
20 Exercises.

**Pieces.****Group No. 1 :—**

POPPER,  
Gavotte in D.

GOLTERMAN,  
Tarantelle.

FISHER,  
Czardas.

DE BOISDEFFRE,  
Suite Orientale.

**Group No. 2 :—**

CHOPIN,  
Nocturne (Servais)

POPPER,  
Widmung.

MASSENET,  
Last Dream of the Virgin.

**Group No. 3 :—**

GOLTERMAN,  
Grand Duo, op. 25.

POPPER,  
Romance.

GILLET,  
Pastorale.

THOME,  
Andante Religioso.

SAINT-SAENS,  
Le Cygne.

DUNKLER,  
La Fileuse.

**Group No. 4 :—**

MENDELSSOHN,  
2 Sonatas

BEETHOVEN,  
5 Sonatas.

**Group No. 5 :—**

ROMBERG,  
Concertino

LEE,  
Op. 39—Duets.

**Group No. 6 :—**

SCHROEDER,  
Concerto.

GOLTERMAN,  
3rd or 4th Concerto.

**NOTE.**—Candidates are advised to memorize as much as possible of their work.

### Technical Tests, etc.

Candidates must be prepared to play from memory all major and melodic and harmonic minor scales and also arpeggios through two octaves; they will also be tested in the simplest form of double stopping.

### Sight Reading.

Candidates will be required to play at sight a piece of moderate difficulty.

### Junior Violoncello Certificate.

Successful candidates in the Junior Violoncello Examination, who have passed the Junior Theory Examination, will be awarded the Junior Violoncello Certificate of the University.

Marks will be awarded under the following heads in the Junior Violoncello Examination:—

	MAXIMUM.
Tone—quality and volume,	15
Technique, left hand,	15
Technique, bowing,	15
Rhythm, choice of tempo, phrasing, etc.,	15
Style, emotion, brilliancy (natural qualifications),	15
Sight reading	15
Memory	10

For particulars as to fees, see page 605



**Intermediate Grade.**

NOTE.—Candidates must bring their own accompanist, their teachers being permitted to act as such.

Candidates will be required to prepare six studies and four pieces chosen from the following list, one piece being selected from each group:—

**Studies.**

DUPONT,  
21 Exercises.

**Pieces.****Group No. 1 :—**

POPPER,  
Hungarian Rhapsody and Tarantelle,  
op. 33.

CASELLA,  
Chanson Napolitaine.

SERVAIS,  
Fantaisie Caractéristique

MAX BRUCH,  
Kol Nidrei.

BACH,  
Aria.

LALO,  
Chants Russes.

**Group No. 2 :—**

SERVAIS,  
Concerto Militaire.  
Souvenir de Spa.

RIES,  
Grand duo on Russian Airs.

D'ERLANGER,  
Andante Symphonique.

**Group No. 3 :—**

RAFF,  
Sonata.

BOELLMAN,  
Sonata.

MOZART,  
Sonata.

**Group No. 4 :—**

LALO,  
Concerto in D.

ROMBERG,  
Concerto in No. 2.

GOLTERMAN,  
Concerto in A minor.

SAINT-SAENS,  
Concerto in A minor.

POPPER,  
Concerto in E minor.

KLUGHARDT,  
Concerto in A minor.

**Technical Tests, etc.**

Candidates must be prepared to play from memory the major and minor scales in thirds and sixths through one octave.

Technic of the Bow.

**Sight Reading.**

Candidates will be required to play at sight one quick and one slow movement of moderate difficulty.

### Intermediate Violoncello Certificate.

Successful candidates in the Intermediate Violoncello Examination, who have passed the Intermediate Theory Examination, will be awarded the Intermediate Violoncello Certificate of the University.

Marks will be awarded under the following heads in the Intermediate Violoncello Examination:—

	MAXIMUM.
Tone—quality and volume,	15
Technique, left hand,	15
Technique, bowing,	15
Individuality, style (natural qualifications),	15
Interpretation, choice of tempo, phrasing, etc.,	15
Sight reading,	15
Memory,	10

For particulars as to fees, see below.

### Table of Fees for Local Examinations.

NOTE.—Candidates' names (in the proper form of application) and fees must be in the hands of the Registrar of the University on or before November 1st, 1914, and May 9th, 1915. No application will be received after these dates.

The fees for certificates will be returned to unsuccessful candidates.

#### Theory:—

Junior.....	\$2.00
Intermediate.....	3.00
Senior.....	4.00
Certificate in each grade.....	1.00

#### Pianoforte, Singing, Violin and Violoncello:—

Elementary Piano.....	\$2.00
Primary.....	3.00
Junior.....	4.00
Intermediate.....	5.00
Certificate in each grade.....	1.00

#### Organ:—

Junior.....	\$4.00
Intermediate.....	5.00
Certificate in each grade.....	1.00

A duplicate of the marks awarded to a candidate in a practical subject by the examiner will be issued on payment of a fee of twenty-five cents.

**HIGHER EXAMINATIONS.****For the Diploma of Licentiate in Music, University of Toronto  
(L. Mus., Tor.).**

The Higher Examinations of the University are of a professional standard, and are also regarded by the University as a qualification for teaching.

The examinations for the diploma of Licentiate in Music, University of Toronto, will be held only at the University annually in June, and will be presided over by a specially appointed Board of Examiners.

Applications must be forwarded to the Registrar of the University on or before May 9th. The fees for examination and diploma must, in all cases, accompany the candidate's application for examination. The fee for diploma will be returned to unsuccessful candidates. The names and addresses of candidates should be written on the proper form of application, which may be obtained through the Registrar of the University.

The examination for the diploma of Licentiate in Music shall be at least forty minutes in length.

Candidates who fail to pass the examination will be allowed to present themselves at a succeeding examination on payment of half the regular fee.

**PIANOFORTE.**

NOTE.—Before a diploma is granted all candidates must pass the University *Junior* and *Senior* Examinations (with honours) in the theory of music.

Candidates must be prepared to play eight numbers chosen from the following list of compositions: One number must be by Bach, one by Beethoven, one by Chopin, one by Schumann, and one by Liszt, the candidate being permitted freedom of choice in the remaining three numbers. One number must be prepared without assistance.

**Licentiate Piano.**

- ARENSKY,**  
Third Suite (First piano part).
- BACH, J. S.**  
Italian Concerto.  
Chromatic Fantasia and Fugue.  
English Suite No. 3 in G minor. (Peters' edition, vol. 203).  
Partita, No. 6 (Peters' edition, vol. 206).  
Fantasia and Fugue in A minor (Peters' edition, vol. 208).
- BACH-BUSONI,**  
Orgelchoralvorspiele (Breitkopf and Härtel).  
Wachet auf, No. 2 and Nun freut euch, liebe Christen, No. 4.  
Prelude and Fugue in D major.
- BACH-LISZT,**  
Prelude and Fugue in A minor.
- BACH-TAUSIG,**  
Toccata and Fugue in D minor.
- BARGIEL, W.**  
Suite in A minor, op. 21.
- BEETHOVEN,**  
Fifteen Variations in E flat, op. 35.  
Six Variations in D, op. 76.  
Sonata, op. 27, No. 2.  
Sonata in E flat, op. 27, No. 1.  
Sonata in D, op. 28.  
Sonata in C, op. 53.  
Sonata in F minor, op. 57.  
Concerto, No. 1, op. 15.  
Concerto, No. 2, op. 19.  
3rd Concerto, op. 37.  
4th Concerto, op. 58.  
5th Concerto, op. 73.
- BRAHMS, J.**  
Scherzo in E flat minor, op. 4, and Clavierstücke, op. 118, Nos. 1, 2 and 3.  
Clavierstücke, op. 118, Nos. 4, 5 and 6, and Zwei Rhapsodien, op. 79, No. 1.  
Variations and Fugue on a theme by Handel, op. 24.
- CHOPIN, FR.**  
Andante Spianato and Polonaise, op. 22.  
Allegro Maestoso.  
Polonaise in A flat, op. 53.  
Rondo, op. 1.  
Ballade in G minor, op. 23.  
Ballade in A flat, op. 47 and 3 Etudes (Posthumous).  
Fantasia in F minor, op. 49.  
Nocturne in G, op. 37. No. 2, and Etudes op. 10, Nos. 2, 4 and 5.  
Nocturne in C minor and Etudes, op. 25, Nos. 8, 9 and 11.  
Concerto in F minor.  
Scherzo in B flat minor, op. 31, and Etudes, op. 25, Nos. 5, 6, and op. 10, No. 8.  
Concerto in E minor, op. 11, first movement or last two movements.  
Sonata, op. 35, B minor.  
Variations Brillantes, op. 12.  
Polonaise, op. 44.
- DVORAK, A.**  
Poetische Stimmungsbilder, op. 85.  
Tema mit Variations, op. 36.
- FRANCK, C.**  
Prelude, Choral and Fugue.  
Prelude, Aria and Finale.
- GRIEG,**  
Ballade in G minor, op. 24.  
Concerto in A minor, op. 16.
- GROENDAH, A. BACKER**  
Études de Concert, op. 47, Nos. 1, 2 and 3.
- HENSELT, A.**  
Concert Variations, E major, op. 1.
- HILLER, F.**  
Concerto F sharp minor.
- JENSEN, AD.**  
Erotikon, op. 44, Nos. 3 and 4.
- LISZT, FR.**  
Erl-König (Schubert), and Polonaise in E.  
Études d'execution transcendante, Nos. 4 and 5; 8 and 9. 11 and 12.  
Ballade in B minor.  
Concerto in A major.  
Concerto in E flat.  
Tarantella from Venezia e Napoli.  
Rhapsodies Hongroises, No. 2, No. 4, No. 6.  
Tannhäuser March (Wagner).  
Isolde's Liebestod and Cantique d'Amour.  
Etude in F minor.  
Harmonies du Soir.  
Rhapsody, No. 9.  
Benediction du Dieu dans la Solitude.
- MACDOWELL, E. A.**  
Sonata in G minor (Eroica), No. 2, op. 50, Movements 1 and 2; 3 and 4.  
Sonata Tragica (any two movements).  
Keltic Sonata (any two movements).
- MENDELSSOHN, F. B.**  
Prelude and Fugue in E minor, op. 35.  
Variations Sérieuses, op. 54.  
Andante and Variations, op. 82.  
Concerto in G minor.  
Three Caprices, op. 33 (any two).  
Scherzo e Capriccio.  
Concerto in D minor.
- MOSZKOWSKI, M.**  
Valse in E major, op. 34, No. 1.  
Caprice Espagnol, op. 37.  
Concerto in E major (first movement).  
Scherzo Valse, Boadbill.  
Etude de Concert, op. 48, No. 1 or No. 2.  
Pensées Fugitives, op. 66.  
Les Vagues, op. 24.  
Barcarolle, op. 27.


- MOZART, W. A.  
Concerto in D minor, complete with  
Reinecke Cadenza to last move-  
ment.
- PADEREWSKI, I. J.  
Introduction and Toccata, op. 6.  
Thème Varié, op. 16, No. 3.
- PAGANINI-LISZT,  
La Campanella.  
Capriccio in E flat.
- RAFF, J.  
Suite, G minor, op. 163.  
Le Galop, op. 104.  
Concerto C minor, op. 185.
- RUBINSTEIN, A.  
Staccato Étude.  
Concerto in D minor (any two move-  
ments).  
Polonaise (LeBal).  
Concert Étude in C.
- SAINT-SAENS, C.  
Caprice in G (Alceste de Gluck).  
Concerto in G minor (any two move-  
ments).  
Variations sur un thème de Beethoven,  
op. 35.  
Scherzo for two pianos (Primo), op. 87.
- SAPELLNIKOFF, W.  
Danse des Elfes, op. 3.
- SAUER,  
Octave Study in E major.
- SCHARWENKA,  
Theme and Variations, op. 48
- SCHUBERT, F.  
Fantasia in G, op. 78.  
Sonata in C minor.  
Fantasia, op. 15, Wanderer Fantasia
- SCHUBERT-TAUSIG,  
Marche Militaire.
- SCHUMANN, R.  
Papillons, op. 2.  
Carnival, op. 9.  
Faschingschwank aus Wien.  
Toccata, op. 7.  
Études Symphoniques, op. 13, Thème  
with any three Études.  
Kriesleriana, op. 16, Nos. 1, 2, 3 and 4.  
Fantasia, op. 17.  
Sonata in G minor, op. 22.
- SCHLOEZER, PAUL DE.  
Deux Études de Concert, op. 1. Either,  
(Cranz edition.)
- SGAMBATI, G.  
Vecchio Menuetto and Toccata, op. 18.
- SINDING, CH.  
Fatum, Variations in C minor, op. 94  
(Breitkopf & Härtel ed.).
- SMETANA, F.  
Concert Étude, op. 17.
- STRAUSS-SCHUETT,  
Kuss Valse, transcription.  
Fledermaus Valse, transcription.
- TSCHAIKOWSKI, P.  
Concerto in B flat minor, first move-  
ment. Second and third move-  
ments.  
Polacca de Concert, op. 72, No. 7  
Variations in F, op. 19, No. 6.
- TANYEFF,  
Blumen Walzer.
- TSCHAIKOWSKI-PAPST,  
Concert Paraphrase on Eugen d'One-  
gin.
- WEBER, C. M. VON.  
Concertstücke, op. 79.  
Sonata in A flat, op. 39  
Sonata in D minor, op. 49.



**Technical Tests, etc., in Higher Piano Examination.**

Candidates must be prepared to play with accurate fingering, and from memory, the following tests:—

**SCALES.**—All major, minor and chromatic scales, legato and staccato, similar motion, with hands together. Major and minor scales, similar motion, separated by a third, a sixth and a tenth, compass four octaves. Major and harmonic minor scales in contrary motion. Legato scales to be played, with and without accents, in quarter, eighth and sixteenth notes staccato scales in quarter and eighth notes only.

 = 176, hands separately.


 = 138, hands together.

Chromatic scales,


 = 168, hands separately.

 = 126, hands together.

All major and harmonic minor scales in double thirds and double sixths in quarter and eighth notes, hands together.

 = 108.

**CHORDS.**—All major and minor common chords, solid and broken, with inversions, four note form; all dominant and diminished seventh chords, with inversions, solid and broken. Solid chords with arm strokes. Broken chords in quarter, eighth and sixteenth notes.


 = 132.

**ARPEGGIOS.**—Arpeggios formed of all the major and minor common chords; the dominant seventh and diminished seventh chords with inversions, through a compass of four octaves with hands separately, and with hands together, one octave apart.

 = 160, hands separately.

 = 138, hands together.

**OCTAVES.**—Major, minor and chromatic scales in similar motion. The arm strokes and legato, in quarter and eighth notes; wrist staccato in quarter, eighth and sixteenth notes.

 = 100.

**TRANSPOSITION.**—Candidates will be required to transpose at sight to any given key, a simple hymn tune.

**SIGHT READING.**—Candidates will be tested in sight playing.

**PLAYING FROM A FIGURED BASS.**—Candidates will be required to play at sight from a figured bass, adding three upper parts.

**EAR TEST.**—Candidates must be prepared to sing the major and minor scales, and any interval within the compass of the octave. If unable to sing, the candidate must recognize the intervals when played on the piano by the examiner (the keyboard not to be seen by candidate).

**SIGHT SINGING.**—Candidates will be required to sing at sight a melody, major or minor, with various modulations and chromatic intervals.

Marks will be awarded separately for the playing of the pieces and the technical tests, in each of which the candidates must obtain at least 60 per cent.

Candidates passing in one part of the examination, but failing in the other, although 60 per cent. of the total combined number of marks may have been obtained, will be required to present themselves for a supplemental examination on that part of the examination in which they may have failed. The fee for this supplemental examination will be ten dollars.

Marks will be awarded under the following heads:—

Scales, chords, arpeggios, octaves.

Accurate observance of notation, rests, etc., and correctness of fingering  
Phrasing, accent, and interpretation.

Discretion in use of pedal.

Quality of touch, and variety and graduation of tone.

Choice of time and steadiness of tempo.

Musicianship as displayed in self-prepared number and in the examination work generally.

Memory playing.

Sight reading.

Sight singing.

Playing from a figured bass.

Transposition.

For particulars as to fees, see page 624.



(3) To sing any interval above or below a given note.

(4) To vocalize four studies of different character, two of which must be in a minor key, selected from "The Masterpieces of Vocalization," Book III (Schirmer), edited by Max Spicker, which may be obtained for soprano, mezzo-soprano, alto, tenor, baritone and bass. The studies must be chosen from the book suited to the compass of the candidate's voice.

(5) To sing four songs from the lists (a) and (b)—two from each list.

(6) To sing two selections from the oratorio and two from the operatic lists respectively.

(7) To sing two recitatives selected from groups (a) and (b)—one from each group.

(8) To sing at sight, (1) an unaccompanied melody; (2) a portion of a song of moderate difficulty with accompaniment.

(9) To sing and play the accompaniment of any solo given in the list for the Junior Local Examinations in Singing, and previously prepared by the candidate.

Candidates must bring their own accompanists.

Candidates may transpose numbers to any key suitable to the voice.

All candidates have the option of singing the words of their solos either in the original language or in the English translation of the same, but credit will be given for efficiency in foreign languages.

For particulars as to fees, see page 624.

Marks will be awarded under the following heads:—

- (1) Voice production.
- (2) Accuracy as to tempo in the selected songs and studies.
- (3) Management and control of breath.
- (4) Time and rhythm.
- (5) Correctness of intonation.
- (6) Precision and neatness in attacking and leaving notes.
- (7) Variety of tone, phrasing and expression.
- (8) Style and correctness in recitative performance.
- (9) Flexibility.
- (10) Distinctness and correctness of pronunciation.
- (11) Sight singing.
- (12) Satisfactory rendering of the prepared song and the candidate's own accompaniment to the same.

**Licentiate.**

**Soprano.**

**Songs.**

List (a)—

BEETHOVEN, L. VAN  
"Neue Liebe, neues Leben."

BRAHMS, J.  
"Meine Liebe ist grün," op. 63, No. 5.  
"O wüss t'ich doch den Weg zurück,"  
op. 63, No. 8.

CHOPIN,  
"The Birdling."

DVORAK, A.  
"O Virgin Mother, gracious be"  
(Spectre's Bride).  
"Hear my Prayer," Biblical Songs,  
No. 3.

FIELITZ, A. VON  
"Ich Kann's nicht fassen," op. 8.  
"Dorf-Idylle," op. 89, No. 3.

FRANZ, R.  
"Willkommen, mein Wald!" op. 21,  
No. 1.  
"Vergessen," op. 5, No. 10.

GRIEG, ED.  
"Herbst sturm," op. 18, No. 4.  
"Vom Monte Pincio," op. 39, No. 1.

LISZT,  
"Mignon's Song."  
"Loreley."  
(One number.)

LOEWE, C.  
"Das Erkennen."

MARTINI,  
"Plaisir d'amour."

MASSENET,  
"Enchantment."  
"Aubade" (Morning Song).

RUBINSTEIN, A.  
"Frühlingsblick."  
"Der Asra," op. 32, No. 6.

SCARLATTI,  
"Oh, cessate di piagarmi."

SCHUBERT, FR.  
"Ave Maria."  
"Rastlose Liebe," op. 5, No. 1.

SCHUMANN, R.  
"Frühlingsfahrt."  
"Abendlied," op. 42, No. 7.

SIBELIUS, JEAN  
"A Song of Spring," op. 50, No. 1.  
"Longing," op. 50, No. 2.

STRAUSS, R.  
"Zueignung," op. 10, No. 1.  
"Du meines Herzens Königin," op.  
21, No. 2.

TSCHAIKOWSKY,  
"Warum," op. 6, No. 5.

VIDAL,  
"Springtide" (Printemps nouveau)

WAGNER, R.  
"Träume."

WEINGAERTNER, F.  
"Drei Kränze," op. 32, No. 1.  
"Das Blumenmädchen," op. 32, No.  
5, and "Scheidende Liebe," op.  
32, No. 4 (Breitkopf & Härtel ed.)

WOLF, H.  
"Lebe Wohl."  
"Verborgenheit."

List (b)—

ALABIEFF, F.  
"Russian Nightingale Song."

AUSTIN, FREDERICK  
"Home Thoughts from Abroad" (No-  
vello edition).

BANTOCK,  
"Two Chinese Songs" (one number).

BEMBERG,  
"Nymphs and Fawns."

BERLIOZ,  
"Absence."

BISHOP,  
"Lo! Here the gentle Lark."

BRUCH,  
"Ave Marie."

CHAMINADE, C.  
"Dreams."

CREMIEUX, OCTAVE  
"The Flower that we love."

DELIUS, F.  
"Abendstimmung."  
"Love's Philosophy" (one number).

DRAPER, C. F.  
"A Song in the Woods."

ERTEL, PAVE  
"Tempest at Night."  
"Jane Grey" (one number).



LOGAN, FREDERIC KNIGHT  
"In a Brahmin Garden" (any two).

MACCUNN, HAMISH  
"Fire of Heaven, whose strong Arrow."

MACDOWELL, L.  
"The Swan bent low."  
"A Maid sings light."

MALLINSON, A.  
"O my Garden."  
"A Birthday."  
"Appleblossom."

NEEDHAM, A.  
"Haymaking."

PARKER, HORATIO  
"A spinning Song."

PARRY,  
"Love is a Babble."  
"Marion" (one number).

SIBELIUS, JEAN  
"The Song of the Roses," op. 50, No. 6

SPROSS, GILBERT  
"Will-o'-the-wisp."

### Oratorio.

BENEDICT,  
"I mourn as a Dove" (St. Peter).

BENNETT, W. S.  
"I will love thee, O Lord" (The  
Woman of Samaria).

COSTA, M.  
"I will extol Thee" (Eli).

GADE, NIELS W.  
"They softly sleep" (The Crusaders).

HANDEL, G. F.  
"Endless Pleasure, endless Love"  
(Senela).  
"Farewell! ye limpid Streams"  
(Jephtha).

HAYDN, J.  
"On mighty Pens" (Creation).

MENDELSSOHN,  
"Hear ye! Israel" (Elijah).  
"Jerusalem, thou that killest the Pro-  
phets" (St. Paul).

RUBINSTEIN,  
"Once more has Heaven" (Paradise  
Lost).

SULLIVAN,  
"Where have they laid Him?" (The  
Light of the World).

### Opera.

BENEDICT,  
"I'm alone" (Lily of Killarney).

BIZET,  
"Je dis que rien ne me pouvante"  
(Carmen).

GOUNOD,  
"Plus grand, dans son obscurité" (La  
Reine de Saba).

MASCAGNI,  
Romanza, "Voi lo sapete, O Mamma"  
(Cavalleria Rusticana).

PUCCINI,  
"Se come voi piccina io fossi" (Le  
Villi).  
"One fine Day." (Ricordi) (Madam  
Butterfly).

ROSSINI,  
"Bel Raggio" (Semiramide).

VERDI,  
"Ave Maria" (Otello).  
"Caro nome" (Rigoletto).

WAGNER, R.  
"Elsa's Dream" (Lohengrin)

WEBER, C. M.  
"Piano, piano, canto pio" (Der Fre-  
schutz).

### Contralto.

#### Songs.

List (a)—

BANTOCK, GRANVILLE  
"Serenade" (Six Jester Songs, No. 5).  
(Breitkopf & Härtel ed.)

BERLIOZ, H.  
"The Spectre of the Rose" op. 7 (Les  
Nuits d'été).

BRAHMS, J.  
"Von ewiger Liebe," op. 43, No. 1.

FRANZ, R.  
"Der Schalk," op. 3, No. 1.

GRIEG, E.  
"Gruss," op. 48, No. 1, and "Dereinst  
gedenke mein," op. 48, No. 2.  
"Im Kahne," op. 60, No. 3.

HANDEL, G. F.  
"Cangio d'aspetto" (Admeto)  
(Chappell ed.)  
"Hymen haste! thy Torch prepare

- LISZT, F.  
"There was a King in Thule."
- RUBINSTEIN, A.  
"Das Blättchen," op. 8, No. 3, and  
"Vernahmet ihr," op. 36, No. 7.
- SCHUBERT, F.  
"Die Allmacht," op. 72, No. 2.  
"Das Heimweh," op. 79, No. 1.
- SCHUMANN, R.  
"Ich hab, im Traum geweinet," op. 48  
No. 13.  
"Am leuchtenden Sommermorgen."
- STANGE,  
"The last Look" (Letzte Begegnung).
- STRAUSS, R.  
"Meinem Kinde," op. 37, No. 3.  
"Zueignung," op. 10, No. 1.
- WEINGAERTNER, F.  
"Hochsommer," op. 31, No. 4.  
"Des Mädchens Nachtgebet," op. 32,  
No. 6.
- WOLF, H.  
"Verborgenheit."
- List (b) —
- BANTOCK, GRANVILLE  
"Song of Genet."
- CHAMINADE, C.  
"Espoir." (Hope.)
- COLERIDGE-TAYLOR, S.  
"The Soul's Expression," op. 42.
- DE PINNA,  
"Gaily chant the Summer Birds."
- DVORAK, A.  
"Clouds and Darkness" (Biblical  
Songs, No. 1).
- ELGAR, E.  
"Sea Slumber-song."
- GOUNOD, C.  
"The golden Thread."
- KELLIE, LAWRENCE  
"The Boy and the Brook."
- LOEWE, C.  
"The Bell-ringer's Daughter."
- MALLINSON, A.  
"The blood-red Ring."  
"Thick is the Darkness."  
"Sing, break into Song."
- MASCHERONI,  
"Hasten to me."  
"Serenata Veneziana."
- WAGNER, R.  
"Slumber, sweet Child."

### Oratorio.

- BACH, J. S.  
"Prepare thyself, Sion" (Christmas  
Oratorio).  
"Grief and Pain" (St. Matthew's  
Passion)
- DVORAK, A.  
"Inflammatus" (Stabat Mater).
- ELGAR, E.  
"Angel's Farewell" (Dream of Ger-  
ontius).
- HANDEL, G. F.  
"He was despised" (Messiah).  
"O thou that tellest good Tidings to  
Zion" (Messiah).
- SAINT-SAENS, C.  
"Thou, O Lord" (The Heavens De-  
clare).  
"Dear Lord thine Aid" (Samson  
and Delilah).
- SMART, H.  
"Be thou patient" (Jacob).

### Opera.

- BIZET,  
"Habanera" (Carmen).
- FLOTOW,  
"Esser mesto" (Marta).
- GLUCK,  
"Divinités du Styx" (Alceste).  
"Che farò senza Euridice" (Orfeo).
- MASSE,  
"Dans le bois à ma voix" (Paul  
Virginie)
- MEYERBEER,  
"Lieta Signor" (Gli Ugonotti).
- ROSSI,  
"Ahl Rendimi."
- ROSSINI,  
"Tu che accendi queste core—Di tant  
palpiti" (Tancredi).
- THOMAS, A. GORING  
"My Heart is Weary" (Nadeschda).
- VERDI, G.  
"Stride la vampa" (Trovatore).
- WEBER, C. M.  
"Donzella nata in Sen" (Oberon).

### Tenor. Songs.

- List (a)—
- BEETHOVEN, L. VAN  
"Hoffnung,"  
"Adelaide."
- BERLIOZ, H.  
"The unknown Land," op. 7 (Les  
nuits d'été).
- BRAHMS, J.  
"Minnelied," op. 71, No. 5.  
"Wie bist du meine Königin," op. 32,  
No. 9.
- CHOPIN, F.  
"Meine Freuden"
- COLERIDGE-TAYLOR,  
"Onaway, awake! Beloved" (Hiawa-  
tha).
- FRANZ, R.  
"Wand! ich in dem Wald des Abends,"  
op. 39, No. 4.  
"Die helle Sonne leuchtet," op. 42,  
No. 2.
- GRIEG, E.  
"Das Kind der Berge," op. 67, No. 2.  
"Stell, dich ein," op. 67, No. 4.
- JENSEN, A.  
"Wenn durch die Piazzetta," op. 50,  
No. 3.
- RAFF, J.  
"Riccio's last Song."
- RUBINSTEIN, A.  
"Gelb rollt mir zu Füßen," op. 34  
No. 9.
- SCHUBERT, F.  
"Mein," op. 25, No. 11.  
"Das Fischermädchen."
- SCHUMANN, R.  
"Singet nicht in Trauertönen," op.  
98, No. 7.
- STRAUSS, R.  
"Ständchen," op. 17, No. 2.
- WEINGAERTNER, FELIX  
"Irrlichter," op. 27, No. 3.  
"Morgenländisches Ständchen," op. 28  
No. 11.
- BACH,  
"Haste, ye Shepherds" (Christmas  
Oratorio).
- GADE, NIELS W.  
"With holy Thoughts seek holy  
Things" (The Crusaders).
- HANDEL, G. F.  
"Thou shalt dash them" (Messiah)
- HAYDN,  
"The Traveller stands perplexed"  
(The Seasons).

- WOLF, H.  
"Nun bin ich da n."  
"Neue Liebe."
- List (b)—
- BALTZELL, W. J.  
"Thou art Mine."
- BEACH, MRS. H.  
"Empress of the Night," and "Exalta-  
tion."
- BLUMENTHAL,  
"The Message."
- CHAMINADE,  
"The Birds' Noël."
- DE KOVEN, REGINALD  
"For this."
- DVORAK, A.  
"Hear my Prayer" (Biblical Songs  
No. 3).
- GOUNOD, CH.  
"Maid of Athens."
- HOLBROOKE, J.  
"Come let us make Love deathless"  
(Novello).
- LEHMANN, L.  
"Ah! Moon of my Delight" (In a Per-  
sian Garden).
- OHR, L.  
"Margarita."
- MALLINSON, A.,  
"Canoe Song."  
"Dream of a blessed Spirit."  
"Snowflakes."
- SIBELIUS, JEAN  
"O wert thou mine," op. 50, No. 4.
- STANFORD,  
"A Message to Phillis."
- STANGE,  
"Favoring Breeze."
- TOSTI, P.  
"Barcarolle."

### Oratorio.

- MENDELSSOHN.  
"I will sing of thy great Mercies and  
Power" (St. Paul).
- PARRY, C. H. H.  
"God breaketh the Battle" (Judith).
- ROSSINI, G.  
"Cujus animam."
- STAINER, J.  
"My Hope is in the Everlasting"  
(Daughter of Jairus).
- SULLIVAN,  
"Refrain thy Voice from weeping"  
(The Light of the World).

# Opera.

**BIZET.**  
 "La Fleur que tu m'avais jetée," (Car-  
 men).  
**DONIZETTI.**  
 "Spirito gentil" (La Favorita).  
**MASCAGNI.**  
 "Siciliana" (Cavalleria Rusticana).  
**MOZART, W. A.**  
 "Dalla sua pace" (Don Giovanni).

**PADEREWSKI, I. J.**  
 "As the ardent singer" (Manru).  
**THOMAS.**  
 "O Vision entrancing" (Esmeralda)  
**VERDI, G.**  
 "Celeste Aida" (Aida).  
 "Questa o quella" (Rigoletto).  
**WAGNER, R.**  
 "In fernem Land" (Lohengrin).  
 "Spring Song" (Walküre).

# Baritone and Bass.

## Songs.

List (a)—

**BANTOCK, GRANVILLE**  
 "Serenade," six Jester songs, No. 5  
 (Breitkopf & Härtel ed.).  
**BRAHMS, J.**  
 "Liebestreu," op. 3, No. 1.  
 "An den Mond."  
**CARISSIMI.**  
 "Victorious my Heart is" (Vittoria!  
 Mio core).  
**FRANZ, R.**  
 "Ich wand're durch die stille Nacht,"  
 op. 35, No. 2.  
**GRIEG, ED.**  
 "Was ich sah," op. 33, No. 6, and "Auf  
 der Reise zur Heimath," op. 33,  
 No. 9.  
**HANDEL, G. F.**  
 "O ruddier than the Cherry," and "I  
 rage, I melt, I burn."  
**MALLINSON, A.**  
 "We sway along."  
 "Sing, break into Song."  
 "A blood red ring"  
 "A Cavalier's Song."  
**MENDELSSOHN, F.**  
 "I'm a Roamer."  
**RUBINSTEIN, A.**  
 "Der Schiffer," op. 8, No. 6.  
**SCHUBERT, F.**  
 "The Wanderer."  
 "The Erl King."  
**SCHUMANN, R.**  
 "Widmung," op. 25, No. 1.  
 "Wanderlied," op. 35, No. 3.  
**SOMERVELL, A.**  
 "My Life has crept so long."  
 "Come into the Garden, Maud." From  
 "Maud" Cycle.  
**STRAUSS, R.**  
 "Morgen," op. 27, No. 4.  
 "Das Thal."  
**VON FIELITZ, ALEXANDER**  
 "Eliland", op. 9 (any three).

**WEINGAERTNER, F.**  
 "Auf ihre Hand," op. 28, No. 4.  
 "Weberlied," op. 28, No. 7.

**WOLF, H.**  
 "Neue Liebe."  
 "An —"

List (b)—

**ALLITSEN,**  
 "King Duncan's Daughter" (Die Bot-  
 schaft).  
**CHAMINADE, C.**  
 "Couplets Bachique,"  
**COWEN, F. H.**  
 "Border Ballad."  
**DAMROSCH, WALTER**  
 "Danny Deever."  
**ELGAR, E.**  
 "The Pipes of Pan."  
**ELLIOTT, J. W.**  
 "Hybrias the Cretan."  
**HERMANN,**  
 "The three Comrades."  
**KORBAY, F.**  
 "Marishka" (Hungarian Song)  
 "Had a Horse."  
**MATTEI,**  
 "Oh! hear the wild Winds blow."  
**PURCELL, H.**  
 "The intrepid Lover." Air by Fuller  
 Maitland, Boosey ed.  
**RANDEGGER, A.**  
 "A freshning Breeze."  
**SULLIVAN, A.**  
 "O Swallow, Swallow" (The Princess).  
**WEIDT, A.**  
 "Watchman's Song."  
**WHITE, M. V.**  
 "Montrose Love Song."  
**WILLIAMS, R. VAUGHAN**  
 "The roadside Fire."

## Oratorio.

- BACH,  
"Mighty Lord and King all glorious"  
(Christmas Oratorio).
- COSTA,  
"Arise, O Lord" (Naaman).
- HANDEL, G. F.  
"The Lord worketh Wonders" (Judas  
Maccabaeus).  
"Thy glorious Deeds" (Samson).  
"Shall I in Mamre's fertile Plain"  
(Joshua).
- MACKENZIE,  
"Unto my Charger" (The Rose of  
Sharon).
- MENDELSSOHN, F.  
"It is enough" (Elijah).  
"Consume them all" (St. Paul).
- PARRY, C. H. H.  
"In the still Watches of the Night"  
(King Saul).
- ROSSINI, G.  
"Pro peccatis" (Stabat Mater).
- VERDI,  
"From the Accursed" (Requiem).

## Opera.

- BEETHOVEN, L. VAN  
"There's nought on Earth like Gold"  
(Fidelio).
- GOUNOD,  
"She alone charmeth my Sadness"  
(La Reine de Saba).
- MASSENET,  
"Vision fugitive" (Herodiade).
- MOZART, W. A.  
"Qui sdegno non s'accende" (Il Fluto  
Magico).  
"Deh Vieni" (Don Giovanni).
- NESSLER,  
"Es hat nicht sollen sein" (Der Trom-  
peter von Säckingen).
- ROSSINI, G.  
"Largo al factotum" (Il Barbiere di  
Seviglia).
- SULLIVAN,  
"Woo, thou, thy Snowflake" (Ivan  
hoe).
- VERDI,  
"Il balen" (Il Trovatore).
- WAGNER,  
"O du mein holder Abendstern"  
(Tannhäuser).

## Recitative.

## Soprano.

## List (a)—

- HANDEL,  
"No more in Zion" (Judas Mac-  
cabaeus).  
"Ye sacred Priests" (Jeptha).  
"Twas at the Royal Feast" (Alexan-  
der's Feast).
- HAYDN,  
"And God said" (Creation).

## List (b)—

- BEETHOVEN,  
"Thou monstrous Fiend" (Abscheu-  
licher). Finale, Act I., Fidelio.
- VERDI,  
"Vanne lasciami" (Il Trovatore, Act  
IV.).
- WEBER,  
"Ocean, thou mighty Monster" (Ob-  
er-  
on).  
"Come una volta il sonno" (Der  
Freischütz).

## Contralto.

## List (a)—

- HANDEL,  
"See, she blushing turns her Eyes"  
(Semele).
- HANDEL,  
"Great Prophetess, my Soul's on fire"  
(Deborah).
- HANDEL,  
"Armida, dispietata" (Rinaldo).

## List (b)—

- MERCANDANTE,  
"Ahl s'estinto" (Donno Caritea).
- ROSSINI,  
"Eccomi alfine" (Semiramide).
- THOMAS, A. GORING  
"What means Iram, he speaks of  
Shame" (Nadeschda).



**Tenor.**

List (a)—

- HANDEL,  
"Comfort ye" (Messiah).  
  
HANDEL,  
"Tyrannic Love" (Susanna).

List (b)—

- BRAGA,  
"Bella de suo sorriso" (Reginella).  
  
VERDI,  
"De'miei bollenti Spiriti" (La Tra-  
viata).

**Baritone and Bass.**

List (a)—

- BACH,  
"Before the Father Our Redeemer  
falling" (St. Matthew).  
  
HANDEL,  
"I'll hear no more" (Esther).  
  
HANDEL,  
"Thus said the Lord" (Messiah)

List (b)—

- VERDI,  
"Parl siamo" (Rigoletto). The first  
portion only, in the key of F, Act  
I., Scene 7.  
  
VERDI,  
"All here is silent."  
"Tace la Notte" (Il Trovatore).

## ORGAN.

NOTE.—Before a diploma is granted all candidates must pass the University *Junior* and *Senior* Local Examinations (with honours) in the Theory of Music, and the Intermediate Local Examination in Piano Playing.

Candidates must be prepared to play ten pieces selected from the following list, one of which must be by Bach, one by Mendelssohn, one by Guil-  
mant, one by Rheinberger, and one by Widor, the candidate being  
allowed freedom of choice in the remaining five numbers. One number  
must be prepared without assistance:—

## Licentiate Organ.

- |   |   |
|---|---|
| <p>BACH, J. S.<br/>Sonata in C minor, No. 2. Peters' edition, vol. 1.<br/>Sonata in E minor, No. 6. Peters' edition, vol. 1.<br/>Passacaglia in C minor. Peters' edition, vol. 1.<br/>Fantasia and Fugue in G minor, No. 4. Peters' edition, vol. 2.<br/>Prelude and Fugue in E minor, No. 9. Peters' edition, vol. 2.<br/>Prelude and Fugue in B minor, No. 10. Peters' edition, vol. 2.<br/>Toccata and Fugue in D minor (Dowie), No. 3. Peters' edition, vol. 3.</p> <p>BEST, W. T.<br/>Fantasia in E minor. Augener's edition, 8,705.</p> <p>BUXTEHUDE, D.<br/>Fantasia, Prelude and Fugue (Cranz).</p> <p>CHIPP, E. T.<br/>Variations on "God preserve the Emperor."</p> <p>ELGAR, E.<br/>Sonata in G. Breitkopf &amp; Härtel ed.</p> <p>FINCK,<br/>Fest Praeludium, op. 63<br/>Sonata, E flat, op. 6.</p> <p>FRANCK, C.<br/>Chorale in E, No. 1.<br/>Chorale in A minor, No. 3.</p> <p>GIGOUT, E.<br/>Grand Choeur Dialogue.</p> <p>GUILMANT, A.<br/>Sonatas Nos. 1; 7; 8. Any one.<br/>Caprice in B flat, op. 20, and Marche aux Flambeaux, op. 59, No. 1.<br/>Prelude, Theme, Variations and Finale, op. 24.</p> <p>HANDEL-BEST,<br/>Concerto, No. 4 in F. Novello.</p> | <p>HARWOOD, BASIL<br/>Dithyramb.<br/>Paean.<br/>Capriccio.<br/>Sonata in E, op. 5.<br/>Breitkopf &amp; Härtel ed.</p> <p>HOLLINS, A.<br/>Concert Overture in C. Weekes.</p> <p>LEMARE, E. H.<br/>Fantasia on the tune "Hanover."<br/>Symphony in G minor.</p> <p>LEMMENS, J. N.<br/>Fantasia in E minor (The Storm).</p> <p>LISZT, F.<br/>Fantasia and Fugue on the name of Bach.</p> <p>LISZT-FRICKER.<br/>Fugue on "Ad nos, ad salutarem undam." Breitkopf &amp; Härtel ed.</p> <p>LUX, F.<br/>Concert Variations on "The Harmonious Blacksmith."</p> <p>MENDELSSOHN, F. B.<br/>Sonata No. 1 in F minor.<br/>Prelude and Fugue in C minor, No. 1.</p> <p>MERKEL, G.<br/>Variations on a theme of Beethoven, op. 45.<br/>Sonata No. 7 in A minor, op. 140.<br/>Sonata No. 8 in B minor, op. 178.<br/>Sonata No. 9 in C minor, op. 183.</p> <p>MOZART-BEST,<br/>Fantasia in F minor. Novello.</p> <p>NOBLE, T. T.<br/>Theme with variations in D flat. Augener's edition, 5,816.</p> <p>PIUTTI, C.<br/>Prelude and Fugue, op. 16.</p> |
|---|---|

- REGER, MAX.**  
Introduction and Passacaglia.
- REUBKE, JUL.**  
Sonata in C minor.
- RHEINBERGER, J.**  
Sonata No. 7 in F minor, op. 127.  
Sonata No. 8 in E minor, op. 132.  
Sonata No. 12 in D flat, op. 161.  
Sonata No. 17 in B, op. 181.  
Sonata No. 20 in F, op. 196.
- SAINT-SAENS, C.**  
Three Rhapsodies. Any one.
- SALOME, TH.**  
Sonata, C minor, op. 25.
- SMART, HENRY**  
Fantasia with Chorale in G.  
Air with variations in A.  
Choral with variations in E flat.
- SCHUMANN, R.**  
Six Fugues. Any one. Novello.
- THIELE, L.**  
Concert Satz in E flat.  
Chromatic Fantasia and Fugue.  
Theme with variations in A flat.
- WIDOR, C. M.**  
Fifth Symphony. First movement with  
any other two movements.  
Sixth Symphony. First movement with  
any other two movements.
- WESLEY, S. S.**  
Variations on "God save the King."
- WEST, J. E.**  
Sonata in D minor. Novello.
- WOLSTENHOLME, W.**  
Sonata No. 1 in F.

Candidates must be prepared to modulate from one key to another; to harmonize a given melody, to play at sight an organ piece; to transpose at sight a given hymn tune or choral; to read at sight vocal score of four parts; to add three parts to a given figured bass; to extemporize upon a given theme; to sing at sight a given melody, and to answer questions in organ construction, tuning, pitch and quality of stops.

Marks will be awarded under the following headings:—

- Accuracy as to notes, rests, etc.
- Independence of action between hands and feet.
- Touch—legato, clear part playing, etc.
- Choice and management of stops.
- Phrasing.
- Strictness and choice of tempo.
- Modulation.
- Harmonizing a given melody.
- Sight reading.
- Sight reading in vocal score.
- Transposition.
- Harmonizing a given figured bass at sight.
- Sight singing.
- Questions on organ construction, etc.
- For particulars as to fees, see page 624.

### VIOLIN.

Candidates must bring their own accompanists.

Before a diploma is granted, all candidates must pass the University *Junior* and *Senior* Examinations (with honours) in the Theory of Music, and must also pass the Primary Piano Examination.

Candidates will be required to prepare eight pieces chosen from the following list, one piece being selected from each one of the 1st, 2nd, 4th 5th, and 6th groups, and three pieces from group 3:

#### Pieces.

##### Group No. 1 :—

WIENIAWSKI,  
2nd Concerto.

LIPINSKY,  
Concert Militaire.

VIEUXTEMPS,  
Concertos (any one).

PAGANINI,  
Concerto in E flat.

ERNST,  
Concerto in F sharp minor.

##### Group No. 2 :—

MENDELSSOHN,  
Concerto.

BRUCH,  
Concerto in G minor.

BEETHOVEN,  
Concerto.

GODARD,  
Concerto in A minor.

BRUCH,  
Scottish Fantasia.

SPOHR,  
Concertos Nos. 2, 7, 8, 9, 11 (any one).

##### Group No. 3 :—

SARASATE,  
Spanish Dances

SARASATE,  
Zigeunerweisen.

WIENIAWSKI,  
Airs Russes.

SAINT-SAENS,  
Rondo capriccioso.

BRAHMS-JOACHIM,  
Hungarian Dances (any one).

PAGANINI,  
Caprices (edited by Kreisler).  
La Campanella.

DAVID,  
Scherzo capriccioso.

BAZZINI,  
La Rondo de Lutins.

GUIRAUD,  
Caprice.

HUBAY,  
The Zephyr.

##### Group No. 4 :—

CHOPIN-SARASATE,  
Nocturne in E flat.

CHOPIN-WILHELMJ,  
Nocturne, op. 27, No. 2.

WAGNER-WILHELMJ,  
Siegfried Paraphrase.

VIEUXTEMPS,  
L'orage, op. 22, No. 6.

SAURET,  
Farfalla.

SARASATE,  
Introduction and Caprice Jota.

##### Group No. 5 :—

BACH,  
Sonatas for Solo Violin, Nos. 1, 3, 4,  
(any one).

TARTINI,  
Le Trille de Diable.

##### Group No. 6 :—

BACH,  
Sonatas Nos. 3, 6, 7, 8, 9, 10 (any one)

BEETHOVEN,  
Sonatas for Piano and Violin (any one)

Sonatas by *Schumann*, *Grieg*, *Rubinstein*, *Rheinberger*, *Schuett*, *Sinding* or *Brahms* (any one sonata).

### SIGHT READING.

Candidates will be required to play at sight, three movements of different character and of moderate difficulty.

Marks will be awarded under the following heads:—

Tone—quality and volume.

Technique, left hand.

Technique, bowing.

Individuality, style and natural qualifications.

Interpretation, phrasing, tempi, etc.

Sight reading.

Memory.

For particulars as to fees, see page 624.

### DIPLOMA VIOLONCELLO.

Candidates must bring their own accompanists.

Before a diploma is granted, all candidates must pass the University *Junior* and *Senior* Examinations (with honours) in the Theory of Music.

Candidates will be required to prepare four pieces chosen from the following list:—

#### Group No. 1:—

BACH,  
Sonatas.

#### Group No. 2:—

BRAHMS,  
Sonata.

BRAHMS,  
Hungarian Dances.

PIATTI,  
12 Capriccios.

SERVAIS,  
6 Caprices, No. 11.

#### Group No. 3:—

ROMBERG,  
1st, 4th, 6th (Peters' edition), 9th  
(Klengel). Concertos.

#### Group No. 4:—

DAVIDOFF,  
Concerto B minor.  
Concerto A minor.

SERVAIS,  
Concerto B minor.

D'ALBERT,  
Concerto C major

DVORAK,  
Concerto B minor.

PIATTI,  
Concerto D minor.

VOLKMAN,  
Concerto.

SCHUMANN,  
Concerto A minor.

MOLIQUE,  
Concerto (Klengel).

HAYDN,  
Concerto D major (Gavert).



The candidate will be required to play at sight a piece of chamber music of moderate difficulty and to execute the violoncello part in any one of Beethoven's or Schubert's Quartettes.

Marks will be awarded under the following heads:—

Tone—quality and volume.

Technique, left hand.

Technique, bowing.

Individuality, style and natural qualifications.

Interpretation, phrasing, tempi, etc.

Sight reading.

Memory.

For particulars as to fees, see below.

### **Fees for Higher Examinations for Diploma of Licentiate in Music, University of Toronto.**

**NOTE.**—Candidates' names (on proper forms of application) must be in the hands of the Registrar of the University on or before May 9th, 1915. No application will be received after this date.

Candidates who, after paying the required fees, do not present themselves, or who fail to pass, may, upon presenting a valid excuse, be allowed the privilege of entering upon the succeeding examination on payment of half the regular fee. The fee for diploma will be returned to unsuccessful candidates.

Fee for examination.....	\$20.00
Diploma .....	5.00

**CURRICULUM IN MUSIC.****Degree of Bachelor of Music.**

The degree of Bachelor of Music (Mus. Bac.) will be conferred by the University of Toronto upon students of music, on compliance with the requirements of the curriculum in music which may from time to time be prescribed by the Senate.

**Matriculation.**

The subjects for matriculation in Music are English and two of: Greek, Latin, German, French.

A candidate for the degree of Bachelor of Music must complete his matriculation prior to admission to the examination of the final year.

The pass standard is the same as that for pass Junior Matriculation.

A candidate who has obtained the average of sixty per cent. on all the six papers but has failed to obtain forty per cent. in at most two of these papers may complete Junior Matriculation by passing on these papers at any one subsequent examination.

A candidate who has obtained forty per cent. on each of at least four papers, with an average of sixty per cent. on the same, will be credited with these papers. In order to complete his Matriculation, he must obtain at one subsequent examination, forty per cent. on each of the remaining papers, with an average of sixty per cent.

**I. ENGLISH.**

**COMPOSITION:** An essay on one of several themes set by the examiners. In order to pass in this subject, legible writing, correct spelling and punctuation, and idiomatic and grammatical construction of sentences are indispensable. The candidate should also give attention to the structure of the whole essay, the effective ordering of the thought, and the accurate employment of a good English vocabulary. About two pages of foolscap is suggested as the proper length for the essay; but quality, not quantity, will be mainly regarded.

One examination paper.

**LITERATURE:** Such questions only will be set as may serve to test the candidate's familiarity with, and intelligent and appreciative comprehension of, the prescribed texts. The candidate will be expected to have memorized some of the finest passages. In addition to the questions on the prescribed selections, others will be set on a "sight passage" to test the candidate's ability to interpret literature for himself.

The candidate shall produce satisfactory proof, by the certificate of the principal of the school from which he comes or otherwise, that he has read carefully, during the preceding year, at least four suitable works in English literature (both prose and poetry) in addition to those prescribed below for examination.

One examination paper.

1915: WORDSWORTH: Michael, Influence of Natural Objects, Nutting, Elegiac Stanzas, To the Rev. Dr. Wordsworth, To the Cuckoo. "Bright flower! whose home," and the following eight sonnets: "It is not to be thought of," "O friend, I know not," "Milton, thou shouldst," "Dark and more dark the shades of evening fell," "Surprised by joy—impatient as the wind," "Hail, twilight, sovereign of our peaceful hour," "I thought of Thee, my partner and my guide," "Such age, how beautiful". TENNYSON: The Epic, and Morte d'Arthur, Oenone, The Brook, and the following sections of In Memoriam: XXVII, LXIV, LXXXIII, LXXXVI, CI, CXIV, CXV, CXVIII, CXXIII. SHAKESPEARE: Merchant of Venice.

1916: COLERIDGE, The Ancient Mariner; TENNYSON, Lotos Eaters, Ulysses, "Of old sat Freedom," Locksley Hall, Songs from the Princess, Ode on the Duke of Wellington, Charge of the Light Brigade, Enoch Arden; SHAKESPEARE: Julius Cæsar.

1917: TENNYSON: The Lady of Shalott, St. Agnes' Eve, "Come not when I am dead," "Break, break, break," In the Valley of Caunteretz, Elaine. BROWNING: "All Service ranks the same with God," Cavalier Tunes, My Last Duchess, The Boy and the Angel, Home Thoughts from Abroad, Up at a Villa, Love among the Ruins, The Guardian Angel, Prospice. SHAKESPEARE: Macbeth.

## II. Two of the following languages:—

### 1. GREEK.

Translation into English of passages from the prescribed texts, with questions thereon.

Translation at sight of simple narrative passages similar to the Xenophon prescribed.

Questions on Greek accidence and on the common rules of Greek syntax, to test the candidate's accuracy and comprehension in such matters as are needful for the intelligent reading of his texts.

The following are the prescribed texts:—

1916: XENOPHON, Philpotts and Jerram, Easy selections from Xenophon, chaps. 3, 4, 5; HOMER, Iliad, VI., 66-118, and 273 to end.

1915, 1917: XENOPHON, Philpotts and Jerram, Easy selections from Xenophon, chaps. 3, 4, 5; HOMER, Iliad, I., 1-350.

Two papers will be set: (1) Prescribed texts: (2) Translation at sight: accidence and syntax.

## 2. LATIN.

Translation at sight of passages of average difficulty from Cæsar, upon which special stress will be laid.

Translations, with questions, from a prescribed portion of Virgil's Aeneid.

The marks assigned for the translation from prescribed authors shall not be more than twenty-five per cent. of the total marks assigned to the Latin papers.

Questions on Latin accidentence.

Translation into Latin of English sentences involving a knowledge of the following principles of Latin syntax: The common uses of the cases; the accusative with the infinitive; the subjunctive in simple sentences; final and result clauses; the law of the sequence of tenses; the indirect question; verbs of fearing, doubting and hindering; the use of the participle, gerund and gerundive, active and passive periphrastic; indirect discourse; and the common forms of the conditional sentence. The vocabulary will be taken from the prescribed portion of Cæsar, and special stress will be laid upon this part of the examination.

Examination upon a short prescribed portion of Cæsar, to test the candidate's knowledge of Latin syntax and his power of idiomatic translation.

The following are the texts prescribed:—

1915: CÆSAR, *Bellum Gallicum*, Book IV., chaps. 20-38, and Book V., chaps. 1-23; VIRGIL, *Aeneid*, Book I., vv. 1-510.

1916, 1917: CÆSAR, *Bellum Gallicum*, Book IV., chaps. 20-38, and Book V., chaps. 1-23; VIRGIL, *Aeneid*, Book II., vv. 1-505.

Two papers will be set: (1) Translation at sight, Virgil, and accidentence; (2) Translation into Latin, syntax, and idiomatic translation from prescribed Cæsar, etc.

## 4. FRENCH.

The candidate's knowledge of French will be tested by: (1) simple questions on grammar; (2) the translation of simple passages from English into French; (3) translation at sight of easy passages from modern French; and (4) an examination on the texts contained in the New High School French Reader.

1915: LABICHE, *La Poudre aux Yeux*.

1916: DAUDET, *Le Petit Chose à l'Ecole* (Blackie's Longer French Texts).

LABICHE, *Le voyageur de M. Perrichon*.

Two papers will be set: (1) Prescribed texts and translation at sight; questions on grammar; (2) translation of English into French.

### 3. GERMAN.

The candidate's knowledge of German will be tested by: (1) simple questions on grammar; (2) the translation of simple passages from English into German; (3) translation at sight of easy passages from modern German, and (4) an examination on the following prescribed texts:—

The texts contained in the New High School German Reader.

1915: WILDENBRUCH, *Der Letzte*.

1916: SEIDEL, *Aus goldenen Tagen*, edited by W. Bernhardt.

1917: BAUMBACH, *Waldnovellen*.

Two papers will be set: (1) Prescribed texts and translation at sight; questions on grammar; (2) the translation of English into German.

In lieu of the above a certificate of having passed the Form II. examination of the Education Department of Ontario or any subsequent examination in a High School, or Matriculation in Arts in any University in His Majesty's dominions, including two of the languages, Greek, Latin, French, German, Italian, will be accepted.

Certificates of having passed Part I. of Junior Matriculation will be accepted *pro tanto* for Matriculation in Music.

Candidates at the Junior Leaving or Junior Matriculation examination who obtain the necessary percentage in the subjects required for Matriculation in Music may, on petition to the Senate, be granted Matriculation in Music.

Special applications for Matriculation may be dealt with by the Senate.

The Senate may in the case of musicians of established reputation who apply for standing in the Faculty of Music, dispense with the Matriculation examination.



## BACHELOR OF MUSIC.

### Undergraduate Course.

In addition to Matriculation the candidate must have passed three examinations before the degree of Bachelor of Music shall be granted.

#### First Year.

1. Harmony in three and four parts.
2. Counterpoint in two and three parts.
3. Musical history up to 1750.

#### Second Year.

1. Harmony in not more than four parts.
2. Strict Counterpoint (including the treatment of the various species in combination) in not more than four parts.
3. Double Counterpoint at the octave, in two parts.
4. Canon in two parts.
5. Fugue as far as subject and answer.
6. History of Music from 1750 to the present time.

#### Final Year.

#### THEORY OF MUSIC:—

1. Harmony in not more than five parts, including some original work.
2. Counterpoint, strict and free, in not more than five parts.
3. Canon in two and three parts.
4. Double Counterpoint at the octave, 10th, 12th, and 15th.
5. Imitation and Fugue up to four parts.
6. A general review of the History of Music from the earliest period to the present time.
7. Elements of Acoustics.
8. Musical form.
9. Orchestration.
10. Viva voce:—Analysis of the full orchestral score of some classical work or works.

#### PRACTICAL MUSIC:

Candidates shall be required to play—on the piano or some orchestral instrument—or sing:—

Two or three compositions (or portions of them) selected by the examiner. They shall also be required to play, at the keyboard, the following tests, etc.:—

1. Transposition.
2. Extemporization upon a given theme.
3. Modulation.

Equivalent tests will be imposed for singers or players upon orchestral instruments.

In addition to the prescribed course for the Final Examination, an original composition, either sacred or secular, will be required, containing at least four movements and sufficiently long to occupy from fifteen to twenty minutes in performance, and must be:

- (a) A chorus in five parts, with a short instrumental introduction.
- (b) A recitative and solo.
- (c) A quartette or quintette for voices only.
- (d) A four part vocal fugue.

Numbers (a), (b) and (d) must have accompaniments for string band only.

This composition must be sent to the Registrar not later than May 1st.

Candidates for the degree may defer presenting this composition until a subsequent annual examination, in which case the fee for examination shall be \$10.

A certificate of having passed the examination of the First and Second Years of the affiliated College of Music or Conservatory of Music will be accepted *pro tanto* in lieu of the First Year examination.

The examination for the diploma of the affiliated College of Music or Conservatory of Music will be accepted *pro tanto* in lieu of the First and Second Year examination.

The Senate may admit *ad eundem statum* undergraduates of other Universities after due inquiry as to the requirements demanded by the institutions in which the candidates obtained their standing.

### Examinations.

The examinations will take place at times to be fixed by the Senate.

Applications must be transmitted to the Registrar at times to be fixed by the Senate, and at the time of application the proper fee must be paid to the Bursar.

### Fees

Matriculation.....	\$10.00
Each examination subsequent to matriculation.....	10.00
For admission <i>ad eundem statum</i> .....	10.00
Degree of Mus. Bac.....	20.00

### TEXT-BOOKS.

Stainer's Treatise of Harmony; Prout's Harmony; Hiles' Grammar of Music, Books I. and II.; Bannister's Music; Bridge's Primer of Counterpoint; Prout's Counterpoint; Richter's Counterpoint (Franklin Taylor's edition); Cherubini's Counterpoint, Canon and Fugue; Prout's Double Counterpoint and Canon; Jadassohn's Canon and Fugue; Higgs' Primer of Fugue; Prout's Fugue; Stainer's Primer of Composition; Prout's Musical Form; Ouseley's Musical Form; Prout's Fugal Analysis; Prout's Primer of Instrumentation; Niemann's Catechism of Musical Instruments; Berlioz on Instrumentation; Stone's Primer on Scientific Basis of Music; Sedley Taylor's Sound and Music; Sedley Taylor's Science of Music; Tyndall on Sound; Bonavia Hunt's History of Music; Naumann's History of Music; Parry's Summary of Musical History (Primer); Rockstro's History of Music; Articles in Grove's Dictionary of Music and Musicians bearing on the various subjects for examination.

Candidates are not restricted to the above list, which is only suggested. The paper work is judged irrespective of any particular author or school.

### Degree of Doctor of Music.

Candidates for the degree of Doctor of Music must be Bachelors of Music of at least three years' standing.

Candidates must present a musical exercise by the first day of April for submission to the examiners in Music, the approval of which is a necessary preliminary to further examination.

The exercise must be of the nature of a Cantata, sacred or secular, scored for full orchestra, and requiring from 40 to 60 minutes for its performance. The cantata must include an overture and parts for one or more solo voices, in addition to choruses.

If the exercise be approved the candidate must undergo an examination of a more advanced character than is involved in the Mus. Bac. examination in Harmony, Counterpoint, Fugue, Musical Form, Orchestration, and Musical History.

The fee for the examination is fifty dollars.

The fee for the degree is thirty dollars.

The examinations will take place at times to be fixed by the Senate.

Applications must be transmitted to the Registrar at times to be fixed by the Senate, and at the time of application the proper fee must be paid to the Bursar.



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**FEDERATED AND AFFILIATED COLLEGES.**

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**WYCLIFFE COLLEGE.**

Wycliffe College was founded in 1877 and incorporated in 1879. In 1885 it was affiliated with the University of Toronto, and federated in 1890 upon the proclamation of the Federation Act.

Its object is the Theological training of candidates for the ministry of the Church of England in Canada and for the foreign missionary field.

In the University and University College its students receive instruction in the prescribed subjects of the Arts Course, as preliminary to the special study of Theology. The Theological course extends over a period of three years, and leads up to the degrees of B.D. and D.D.

The first year of the Theological Course may be taken concurrently with the Arts work of the University by means of the Theological options, and by following the schedule laid down in the Calendar of the College. Students in Arts enrolled in University College can also be enrolled in Wycliffe College in the subjects allowed as options in the Arts Course.

The first building of the College was erected in 1882. The work is now carried on in the building erected in 1891, and added to in 1902, 1908, and in 1911, contiguous to Queen's Park, and in close proximity to the main building of the University of Toronto, with rooms for 98 students, Convocation hall, lecture rooms, library, chapel, dining hall, etc.

Students have access to the library, gymnasium and all the privileges of the University.

**The Faculty.**

- REV. T. R. O'MEARA, LL.D. (PRINCIPAL), *Professor of Practical Theology—Homiletics and Pastoral Theology.*
- THE VEN. HENRY J. CODY, M.A., D.D., LL.D., *Professor of Systematic Theology.*
- REV. W. H. GRIFFITH THOMAS, M.A., D.D., *Professor of Old Testament Literature, Ecclesiology and English Bible.*
- REV. G. M. WRONG, M.A. (Professor of History in the University of Toronto), *Ecclesiastical History.*
- REV. DYSON HAGUE, M.A. (Vicar of the Church of the Epiphany, Toronto), *Professor of Liturgics.*
- REV. T. H. COTTON, M.A., B.D., *Professor of Apologetics.*
- REV. W. T. HALLAM, B.A., B.D., *Professor of Literature and Exegesis of the New Testament.*
- REV. E. A. MCINTYRE, M.A., *Tutor.*
- REV. HOWARD W. K. MOWLL, B.A., *Resident Tutor.*
- MIRIAM W. BROWN, *Instructress in Reading and Voice Culture.*

*President and Chairman of Council.*

N. W. HOYLES, B.A., K.C., LL.D.

*Representatives on the University Senate.*

THE PRINCIPAL. N. W. HOYLES, B.A., K.C., LL.D.

VEN. ARCHDEACON CODY, M.A., D.D., LL.D.

*Librarian.*

REV. T. H. COTTON, M.A., B.D.

*Registrar and Bursar.*

HERBERT MORTIMER, ESQ.

**KNOX COLLEGE.**

Knox College was established at Toronto in 1844, as a theological seminary in connection with the Synod of the Presbyterian Church of Canada (Free Church), which had been organized in the same year. In 1858 it was incorporated by Act of Parliament. In 1861, in consequence of the union of the Synod of the Free Church and that of the United Presbyterian Church, as the Synod of the Canada Presbyterian Church, Knox College and the Theological Institute of the United Presbyterian Synod were united.

After several changes of location the buildings on Spadina Avenue were erected in 1875. Knox College was affiliated with the University of Toronto in 1885, and federated in 1890, upon the proclamation of the Federation Act. In the University and University College such of its students as are not proceeding to a degree receive instruction during three sessions in English, Latin, Greek, History, Logic, Mathematics, Chemistry, Biology, Physics, Psychology, Mental and Moral Philosophy and Hebrew. Most of the entrants in Theology, however, have completed a regular University course. The course in Theology extends over three years. In addition to the required course, a special course of study leads to the degree of B.D. A number of scholarships and prizes are offered for competition in each year. Religious Knowledge options may be taken by students of the University in any year of their course, and Theological options taken in the Third and Fourth years may be counted as part of the regular course in Theology. Courses of study in the New Testament are provided in Knox College for every year of the Undergraduate course, and may be taken as Religious Knowledge options for the University degree.

The College is governed by "The Board of Management": Sir William Mortimer Clark, LL.D., Chairman; Rev. G. R. Fasken, B.A., Secretary; Rev. J. Somerville, D.D., Treasurer. The "Board" consists of thirty-five members, appointed annually by the General Assembly of the Presbyterian Church in Canada.

**The Faculty.**

REV. ALFRED GANDIER, M.A., D.D., *Principal and Professor of Pastoral Theology and the English Bible.*

REV. JAMES BALLANTYNE, B.A., D.D., *Professor of Church History and Church Government.*

REV. J. D. ROBERTSON, M.A., D.Sc., *Professor of Apologetics, Christian Ethics and Homiletics.*

REV. T. B. KILPATRICK, D.D., *Professor of Systematic Theology.*

REV. ROBERT LAW, M.A., D.D., *Professor of New Testament Literature and Exegesis.*

REV. RICHARD DAVIDSON, M.A., Ph.D., *Professor of Old Testament Literature and Exegesis.*

REV. E. COCKBURN, M.A., *Librarian.*

REV. R. C. TIBB, B.A., *Secretary of Senate.*

REV. J. A. TURNBULL, LL.B., D.D., *Chairman of Board of Examiners.*

MR. F. H. KIRKPATRICK, *Teacher of Elocution.*

**VICTORIA UNIVERSITY.****Faculty of Theology.**

The Faculty of Theology in Victoria College was established in 1871 for the purpose of training candidates for the ministry of the Methodist Church. Its classes and degrees have, however, always been open to candidates for the ministry in any Church.

Instruction is provided in the various courses of study leading up to ordination in the Methodist Church, viz., the Ordinary Course, the Course for Graduates in Arts, and the B.D. Course. The first-named course presupposes matriculation in Arts, the last two pre-suppose graduation in Arts.

Undergraduates in Arts, whether candidates for the ministry or not, have the privilege of taking certain subjects in Theology as options in Religious Knowledge in the several years of their course, as indicated in this Calendar in the statement of the Arts Course.

For further information as to courses of study, fees, honours, prizes, scholarships and regulations, see the Theological Calendar of Victoria College, or apply to the Rev. Professor F. H. Wallace, M.A., D.D., Dean of the Faculty.

**The Faculty.**

REV. F. H. WALLACE, M.A., D.D., *Professor of New Testament Exegesis and Literature.*

REV. J. F. McLAUGHLIN, B.A., B.D., *Professor of Old Testament Exegesis and Literature.*

REV. R. P. BOWLES, M.A., D.D., LL.D., *Professor of Systematic and Historical Theology.*

W. B. LANE, M.A., PH.D., *Professor of Ethics and Didactics.*

W. H. GREAVES, M.A., *Associate Professor of Public Speaking.*

REV. J. H. MICHAEL, M.A., *Associate Professor of New Testament Exegesis and Literature.*

REV. N. BURWASH, S.T.D., LL.D., F.R.S.C., *Lecturer in the History of Doctrine and in Church History.*

REV. W. A. POTTER, B.A., B.D., *Lecturer in Old Testament Exegesis and Literature.*

W. T. BROWN, M.A., PH.D., *Lecturer in Ethics and Apologetics.*

REV. ALEXANDER LANGFORD, D.D., *Special Lecturer in Methodist Discipline.*

REV. N. CACCIAPUOTI, B.Th., *Instructor in the Conference Italian Course.*



## ROYAL COLLEGE OF DENTAL SURGEONS.

This institution was incorporated in 1868, with power to examine and issue license to practise as a dentist in the Province. In connection with the College a School of Dentistry was established in 1875 for the instruction of students in their professional work.

### The Faculty.

- J. BRANSTON WILLMOTT, D.D.S., M.D.S., LL.D., *Dean of the Faculty, Professor Emeritus of Operative and Prosthetic Dentistry.*
- W. T. STUART, M.D., C.M., *Professor of Chemistry and Anatomy.*
- W. EARL WILLMOTT, L.D.S., D.D.S., *Clinical Professor of Prosthetic Dentistry.*
- A. PRIMROSE, M.B., M.R.S.C. (Associate Professor of Surgery, University of Toronto), *Professor of Surgery.*
- A. E. WEBSTER, L.D.S., D.D.S., M.D., *Professor of Operative Dentistry and Dental Pathology and Therapeutics.*
- A. A. STEWART, L.D.S., D.D.S., *Professor of Crown and Bridge Work.*
- F. A. CLARKSON, M.B., *Professor of Physiology.*
- G. G. HUME, L.D.S., D.D.S., *Professor of Orthodontia.*
- G. M. HERMISTON, B.A., L.D.S., D.D.S., *Professor of History and Ethics.*
- W. E. WILLMOTT, L.D.S., D.D.S., *Professor of Dental Materia Medica and Pharmacology.*
- W. E. CUMMER, L.D.S., D.D.S., *Professor of Prosthetic Dentistry.*
- JOSEPH S. GRAHAM, M.B., *Professor of Histology, Bacteriology and Pathology.*
- W. H. DOHERTY, L.D.S., D.D.S., *Professor of Dental Anatomy and Comparative Dental Anatomy.*
- J. B. WILLMOTT, D.D.S., M.D.S., *Lecturer on Dental Jurisprudence.*
- THOS. COWLING, L.D.S., D.D.S., *Professor of Metallurgy and Instructor in Chemistry.*
- J. C. McLENNAN, Ph.D., *Professor of Physics.*
- F. D. PRICE, L.D.S., D.D.S., *Instructor in Electro-Therapeutics.*
- E. W. PAUL, L.D.S., D.D.S., *Instructor in Anaesthesia and Extraction.*
- A. J. McDONAGH, M.D., *Lecturer and Clinician in Pyorrhea Alveolaris.*
- B. O. FIFE, L.D.S., D.D.S., *Clinical Professor of Operative Dentistry.*
- H. M. LANCASTER, B.A.Sc., *Professor of Physiological Chemistry.*
- J. W. CORAM, L.D.S., D.D.S., *Professor of Dental Ceramics. Associate Clinical Professor of Operative Dentistry.*
- WALLACE SECCOMBE, L.D.S., D.D.S., *Professor of Dental Economics.*
- A. D. A. MASON, L.D.S., D.D.S., *Dental Clinician at General Hospital.*

- J. G. CORAM, L.D.S., D.D.S.; T. W. DAWSON, L.D.S., D.D.S.; W. C. SMITH, L.D.S., D.D.S.; E. E. BRUCE, L.D.S., D.D.S.; R. D. THORNTON, L.D.S., D.D.S.; C. A. CORRIGAN, L.D.S., D.D.S., *Clinical Instructors in the Infirmary.*
- G. A. WILCOX, L.D.S., D.D.S., *Instructor in Charge of the Freshman Prosthetic Laboratory.*

College Building, 240 College St., Toronto.

The Royal College of Dental Surgeons was affiliated with the University of Toronto in 1888, and shortly thereafter an examination for the degree of Doctor in Dental Surgery was instituted in the University. For curriculum see p. 523.

## ONTARIO COLLEGE OF PHARMACY.

The Council of the College of Pharmacy, the biennially-elected governing body of the practising pharmacists of the Province of Ontario, began in 1882 to give instruction in the various subjects necessary for license for druggists. The College Building, situated in St. James' Square, was erected in 1886, and the Faculty reorganized and extensive additions made to the building in 1891. In the same year affiliation was entered into with the University of Toronto. For curriculum, see p. 527. For details as to laboratory and other courses, preliminary qualifications, etc., see Annual Announcement of the College, which may be had by addressing W. B. Graham, Registrar-Treasurer, Ontario College of Pharmacy, Toronto, Ontario.

### The Faculty.

CHARLES F. HEEBNER, PH.G. (N.Y.), PHM.B. (Tor.), *Dean, Professor of Theory and Practice of Pharmacy and Dispensing, Director of the Pharmaceutical and Dispensing Laboratories.*

J. T. FOTHERINGHAM, B.A., M.B. (Tor.), M.D., C.M. (Trin.), *Professor of Materia Medica and Pharmacognosy.*

GRAHAM CHAMBERS, B.A., M.B. (Tor.), *Professor of Chemistry, Physics and Toxicology.*

PAUL L. SCOTT, M.B. (Tor.), *Professor of Botany and Microscopy.*

GEORGE A. EVANS, PHM.B. (Tor.), *Professor of Analytical Chemistry, Director of the Chemical Laboratory.*

# ONTARIO AGRICULTURAL COLLEGE.

## Faculty of Instruction.

1913-1914.

(All except the President arranged in order of seniority.)

- G. C. CREELMAN, B.S.A., LL.D., *President*.  
 H. H. DEAN, B.S.A., *Professor of Dairy Husbandry*.  
 C. A. ZAVITZ, B.S.A., *Professor of Field Husbandry*.  
 J. HUGO REED, V.S., *Professor of Veterinary Science*.  
 H. L. HUTT, B.S.A., *Professor of Landscape Gardening*.  
 G. E. DAY, B.S.A., *Professor of Animal Husbandry*.  
 J. B. REYNOLDS, B.A., *Professor of English*.  
 R. HARCOURT, B.S.A., *Professor of Chemistry*.  
 MISS MARY URIE WATSON, *Director of Home Economics*.  
 JOHN EVANS, *Professor of Manual Training*.  
 S. B. MCCREADY, B.A., *Professor of Nature Study*.  
 S. F. EDWARDS, M.S., *Professor of Bacteriology*.  
 C. J. S. BETHUNE, M.A., D.C.L., *Professor of Entomology and Zoology*.  
 W. R. GRAHAM, B.S.A., *Professor of Poultry Husbandry*.  
 W. H. DAY, B.A., *Professor of Physics*.  
 E. J. ZAVITZ, B.A., M.S.F., *Professor of Forestry*.  
 J. W. CROW, B.S.A., *Professor of Pomology*.  
 J. E. HOWITT, M.S.A., *Professor of Botany*.  
 T. D. JARVIS, B.S.A., *Associate Professor of Entomology and Zoology*.  
 MISS ANNIE ROSS, M.D., *Lecturer in Physiology, Home Nursing, Psychology*.  
 H. H. LEDREW, B.S.A., *Lecturer in Economics*.  
 D. H. JONES, B.S.A., *Lecturer in Bacteriology*.  
 WM. HUNT, *Lecturer in Floriculture*.  
 MORLEY PETTIT, *Lecturer in Apiculture*.  
 MISS GRACE GREENWOOD, *Instructor in Normal Methods*.  
 E. W. KENDALL, *Lecturer in Manual Training*.  
 L. CAESAR, B.A., B.S.A., *Lecturer in Fungus Diseases and Insects*.  
 W. J. SQUIRRELL, B.S.A., *Lecturer in Field Husbandry*.  
 H. L. FULMER, B.S.A., *Lecturer in Chemistry*.  
 R. E. STONE, B.Sc., Ph.D., *Lecturer in Botany*.  
 MISS M. A. PURDY, *Demonstrator in Chemistry*.  
 J. W. CHARLESWORTH, B.A., *Lecturer in English and German*.  
 W. R. REEK, B.S.A., *Lecturer in Animal Husbandry*.  
 MISS JEAN RODDICK, *Instructor in Domestic Science*.  
 MRS. F. DOUGHTY, *Demonstrator in Domestic Art*.

- R. R. GRAHAM, B.A., B.S.A., *Demonstrator in Physics.*  
 MISS MARY E. MCLENNAN, *Demonstrator in Domestic Science.*  
 A. H. MCLENNAN, B.S.A., *Demonstrator in Pomology.*  
 A. MCKAY, *Demonstrator in Cheddar Cheesemaking.*  
 MISS ALTA V. DICKEY, *Instructor in Domestic Art.*  
 J. SPRY, B.S.A., *Demonstrator in Physics.*  
 A. J. GALBRAITH, B.S.A., *Demonstrator in Chemistry.*  
 A. W. BAKER, B.S.A., *Demonstrator in Entomology.*  
 MISS NETTA M. NIXON, *Demonstrator in Laundry and Household Administration.*  
 A. L. GIBSON, B.S.A., *Demonstrator in Chemistry.*  
 A. C. MCCULLOCH, B.S.A., *Demonstrator in Poultry Husbandry.*  
 W. H. WRIGHT, B.S.A., *Demonstrator in Botany.*  
 MISS BELLE MILLAR, *Demonstrator in Butter Making and Soft Cheese Making.*  
 R. W. BROWN, B.S.A., *Demonstrator in Cream Separators and in Butter Making.*  
 N. CURTIS, *Resident Master and Instructor in English.*  
 S. R. CURZON, *Fellow in Chemistry.*  
 D. W. GILLIES, *Instructor in Athletics.*

### College Officers.

- G. C. CREELMAN, B.S.A., LL.D., *President.*  
 S. SPRINGER, *Bursar.*  
 S. H. GANDIER, B.S.A., *Secretary.*  
 MISS J. GARDINER, *Librarian.*  
 MISS A. O. HALLETT, *Assistant Librarian.*  
 N. CURTIS, *Resident Master.*  
 W. O. STEWART, M.D., *Physician.*  
 MRS. M. CUNNINGHAM, *Matron.*



**THE ONTARIO VETERINARY COLLEGE.**

In 1862, through the efforts of the late Hon. Adam Ferguson of Woodhill and the late George Buckland, Professor of Agriculture in the University of Toronto, Professor Andrew Smith, a graduate of the Edinburgh Veterinary College, was appointed to give instruction in Veterinary Studies in the Province of Upper Canada. The Veterinary College thus established was later taken over by the Government of the Province of Ontario and affiliated with the University of Toronto, from which graduates of the College may receive the degree of Bachelor of Veterinary Science and Doctor of Veterinary Science. For Curriculum, see page 548.

**College Staff and Subjects Taught, 1913-14.**

- E. A. A. GRANGE, V.S., M.Sc.,  
*Contagious Diseases, Veterinary Hygiene.*
- T. G. BRODIE, M.D., F.R.S.,  
*Physiology.*
- C. G. SAUNDERS, V.S., B.V.Sc.,  
*Anatomy, Surgery, Canine and Feline Diseases.*
- J. A. AMYOT, M.B.,  
*Bacteriology.*
- J. N. PRINGLE, M.R.C.V.S., B.V.Sc.,  
*Sporadic Diseases of Horses and Cattle, Dentistry,*  
*Principles of Horse-Shoeing.*
- D. KING SMITH, M.B., V.S.,  
*Pathology, Parasitology, Milk Inspection.*
- L. T. ADDISON, B.A., M.D.,  
*Biology, Histology, Pathology.*
- PAUL L. SCOTT, M.B.,  
*Pharmacy.*
- J. A. CAMPBELL, V.S.,  
*Dairy Inspection.*
- DYCE W. SAUNDERS, K.C.,  
*Veterinary Jurisprudence.*
- F. B. KENRICK, B.A., Ph.D.,  
*Chemistry.*
- C. A. TEMPLE, M.D., C.M.,  
*Materia Medica.*
- J. HORACE FAULL, B.A., Ph.D.,  
*Botany.*
- A. C. WALKER, V.S., B.V.Sc.,  
*Meat Inspection.*

- FLOYD D. SHAVER, B.S.A.,  
*Zootechnics.*
- D. R. CALEY, V.S.,  
*Demonstrator.*
- H. G. WILLSON, B.A., M.B.,  
*Demonstrator.*
- E. A. McCULLOUGH, B.A., M.D.  
*Demonstrator.*
- F. W. SCHOFIELD, V.S., D.V.Sc.,  
*Demonstrator.*
- S. A. CUDMORE, B.A., (OXON.),  
*Tutorial Instructor.*
- J. E. ANDERSON,  
*Executive Clerk.*

## THE TORONTO COLLEGE OF MUSIC.

The Toronto College of Music, situated on Pembroke Street, incorporated in 1890, was affiliated with the University of Toronto in the same year. A curriculum for examinations and degrees in Music in the University has been instituted. The course of study for graduation extends over a period of three years. For further particulars see the Annual Announcement of the College.

### Teaching Staff.

- Piano*—F. H. TORRINGTON, MUS. DOC.; W. E. FAIRCLOUGH, F.R.C.O.; T. C. JEFFERS, MUS. BAC.; ALICE E. MANSFIELD, MUS. BAC.; R. G. STAPELLS, CECILE WILLIAMSON, MOLNA O'CONNOR, CLARA JEFFERY, UDELLA JONES, MARION PORTER, MRS. L. DOXSEE, MRS. J. T. ANDERSON, W. TALBOT SHARPE, L.I.S.M.; MAUD O. DOWSLEY, MUS. BAC.; HELEN SULLIVAN, MELISSA JOHNSTON, MAY R. KELLY, DORA STUTCHBURY, GLADYS COOPER, HELENA SLAGHT.
- Organ*—F. H. TORRINGTON, MUS. DOC., W. E. FAIRCLOUGH, F.R.C.O., T. C. JEFFERS, MUS. BAC., R. G. STAPELLS.
- Vocal*—F. H. TORRINGTON, MUS. DOC., T. C. JEFFERS, MUS. BAC., J. D. RICHARDSON, MRS. LEONORA KENNEDY, ARTHUR V. LEITHEUSER, OLIVE L. CASEY, CLARA JEFFERY.
- Theory*—W. E. FAIRCLOUGH, F.R.C.O., T. C. JEFFERS, MUS. BAC., ALICE MANSFIELD, MUS. BAC., MAUD OGILVIE DOWSLEY, MUS. BAC.
- Kindergarten Music*—HULDA WESTMAN, MRS. DOXSEE, ETHEL HEAKES.
- Violin*—W. J. DONVILLE, P. BRANCIERE, F. NAPOLITANO, H. MEREDITH-SMITH, MED. R.A.M., T. GARRATT.
- Viola*—W. J. OBERNIER.
- Violoncello*—H. BATCHELOR, F. S. WATSON.
- Flute and Piccolo*—ARTHUR E. SEMPLE, L.R.A.M., F.T. COLL.M., L.A.B.
- Oboe*—S. PARKER.
- Clarionet*—H. CLARKE.
- Bassoon, Bass Clarionet*—H. CROWTHER.
- Cornet and Trumpet*—E. E. FARRINGER.
- Horn*—R. JOSE.
- Slide Trombone*—R. PLANT.
- Euphonium and Tuba*—T. B. JONES.
- Tympani and Percussion Instruments*—C. RIDDY.
- Harp*—MRS. SULLIVAN-MALLON.

*Mandolin, Guitar, Banjo*—UDELLA M. JONES.

*Quartette and Ensemble Playing*—F. H. TORRINGTON, MUS. DOC.

*Orchestral and Band Playing, and the Art of Conducting*—F. H. TORRINGTON, MUS. DOC.

*Church Music, Oratorio, Choir*—F. H. TORRINGTON, MUS. DOC., T. C. JEFFERS, MUS. BAC., W. E. FAIRCLOUGH, F.R.C.O.

*Musical History, Solfeggio and Sight Singing*—T. C. JEFFERS, MUS. BAC., ALICE MANSFIELD, MUS. BAC.

*The Art of Accompanying*—F. H. TORRINGTON, MUS. DOC.

*Pianoforte Tuning*—ROBERT ASHCROFT.

*Literature and Language*—MONICA REGAN.

### TORONTO CONSERVATORY OF MUSIC.

The Toronto Conservatory of Music, incorporated in 1886, is affiliated with the University of Toronto, and its buildings are situated at the corner of College Street and University Avenue.

Each season of forty weeks opens on September 1st, and closes with the following June. The courses of study for graduation extend over a period of three or more years, according to the proficiency of the student. Students are prepared for University examinations leading to degrees in Music. According to the terms of affiliation existing between the Conservatory of Music and the University of Toronto, students who have passed the First University Examination in Theory will be exempted from the First and Second Examinations; and students holding the Theory Diploma of the Conservatory will be exempted from the First and Second University Examinations in Music. For particulars of these examinations see the curriculum, page 552 of this Calendar.

#### Teaching Staff.

*Pianoforte*—VIGGO KIHLMAN, PAUL WELLS, FRANK S. WELSMAN, G. D. ATKINSON, B. HAYUNGA CARMAN, J. W. F. HARRISON, OTTO JAMES, W. J. McNALLY, T. J. PALMER, EUGENIE QUEHEN, A.T.C.M., L.R.A.M.; ADA J. F. TWOHY, MUS. BAC.; MAUD GORDON, A.T.C.M.; EDMUND HARDY, F.T.C.M., MUS. BAC.; DONALD HERALD, A.T.C.M.; F. ARTHUR OLIVER, FLORENCE TURNER, JESSIE I. ANDERSON, A.T.C.M.; MONA BATES, A.T.C.M.; F. H. BURT, MUS. BAC.; HELEN R. WILSON, A.T.C.M.; JESSIE M. ALLEN, ADA M. BRIGGS, F.T.C.M., MUS. BAC.; OLIVE BRUSH, A.T.C.M.; ANNIE M. CONNOR, F.T.C.M.; ANNIE JOHNSON, A.T.C.M.; MAY LIVINGSTONE, A.T.C.M. (Theory); MARY MORLEY, A.T.C.M.; EDITH MYERS, A.T.C.M.; MABEL O'BRIEN, A.T.C.M.; ISABEL SNEATH, A.T.C.M.; ALMA F. TIPP, A.T.C.M.; LILLIAN E. WILLCOCKS, A.T.C.M.; LOUISE M. RISDON, VIDA COATSWORTH, A.T.C.M.; ALMA COCKBURN, MUS. BAC., A.T.C.M., L. MUS., (TOR.); JENNIE A. CREIGHTON, A.T.C.M.; MAUDE E. CLAXTON, A.T.C.M.; EDITH DICKSON, F.T.C.M.; MARJORIE HARPER, LILY LAWSON, A.T.C.M.; CONSTANCE A. D. MARTIN, A.T.C.M.; MAUD M. POLLOCK, A.T.C.M.; MURIEL M. ROGERS, A.T.C.M.; RACHEL E. A. WILSON, MUS. BAC.; EDNA V. BAGGS, EMILY M. BAKER, A.T.C.M.; VIRGINIA COYNE, MARY ENDICOTT, MARGARET R. GROVE, EVA I. HUGHES, A.T.C.M.; LULU MCGILL, MADELINE SCHIFF, A.T.C.M.; ELLA BLACK, EDITH M. BRECKENRIDGE, ETHEL MAY CRANE, LENIE F. DAVIS, MUS. BAC.; MARGUERITA HAYNES, A.T.C.M.; EDNA I.



JOHNSTON, IRENE A. JONES, ALICE M. KIMBER, EVELYN PAMPHYLON, WINNIFRED L. STALKER, A.T.C.M.; ALBERTA STAPLES, CHARLOTTE WITHERIL, MARY WIDNER, HAZEL BARR, ETHEL BASS, MARGUERITE BULLOCK, ELIZABETH FORSYTH, PHYLLIS LEATHERDALE, LUCY V. MACDONALD, LILLIE MCKNIGHT, THELMA MUIR, MARGUERITE NEILSON, EDNA S. SHERRING, REVA WIDNER.

*Voice*—EDWARD BROOME, MUS. DOC.; ALBERT HAM, MUS. DOC. (Trin. Coll., Dublin), F.R.C.O., L.T.C., (Lond.); MADAME BENITA LEMAR, H. ETHEL SHEPHERD, A.T.C.M.; A. T. CRINGAN, MUS. BAC.; FRANCIS COOMBS, RUSSELL G. MCLEAN, HOWARD MASSEY FREDERICK, A. MABEL HENDERSON, H. J. LAUTZ, DAVID DICK SLATER, MARY HEWITT SMART, M. M. STEVENSON, JEAN E. WILLIAMS, A.T.C.M.; MRS. J. W. BRADLEY, EDITH M. FITCH, ELIZABETH L. WALKER, F. H. BURT, MUS. BAC.; NINA GALE, A.T.C.M.; ANNIE HALLWORTH, A.T.C.M.; MRS. NORMA REYNOLDS REBURN, G. E. HOLT, MRS. H. W. PARKER, A.T.C.M.; MURIEL E. BRUCE, A.T.C.M., L. MUS. (Tor.); S. MARJORIE RATCLIFFE, A.T.C.M.; LILLIAN E. WILLCOCKS, ETHEL S. ARMOUR, A.T.C.M.; SADIE A. MACTAVISH, ESTELLE M. ORTON.

*Theory*—HEALEY WILLAN, F.R.C.O.; EDMUND HARDY, F.T.C.M., MUS. BAC.; ANNIE JOHNSON, A.T.C.M.

*Organ*—EDWARD BROOME, MUS. DOC.; ALBERT HAM, MUS. DOC. (Trin. Coll., Dublin), F.R.C.O., L.T.C. (Lond.); G. H. KNIGHT, MUS. BAC., (Victoria Univ. Manchester), Assoc. Trin. Coll. (Lond.); G. D. ATKINSON, J. W. F. HARRISON, OTTO JAMES, A.R.C.O.; T. J. PALMER, A.R.C.O., F.R.C.O.; EDITH DICKSON, F.T.C.M.; F. ARTHUR OLIVER, A.T.C.M.; ADA J. F. TWOHY, MUS. BAC.

*Violin*—MRS. B. DRECHSLER ADAMSON, LINA D. ADAMSON, FRANK E. BLATCHFORD, A.T.C.M.; LENA M. HAYES, A.T.C.M.; NORA M. HAYES, A.T.C.M.; BEATRICE M. PREST, A.T.C.M.; MINNIE CONNOR, F.T.C.M.

*Violincello*—LEO SMITH.

*Flute*—H. T. CULLY,

*Saxophone and Clarinet*—J. DINEEN.

*Cornet, French Horn, Slide Trombone, Euphonium, Tuba*—JOHN D. SLATTER, Bandmaster, 48th Highlanders.

*Guitar, Mandolin and Banjo*—L. N. WATKINS.

*Art of Accompanying*—DAVID DICK SLATER.

*Sight-Singing Class*—MR. T. J. PALMER.

*Sight-Singing*—ETHEL S. ARMOUR, A.T.C.M.; SADIE A. MACTAVISH.

*Piano Tuning*—R. F. WILKS.

*Myers' Music Method*—EDITH MYRES, EVA IRENE HUGHES, REVA WIDNER.

*French*—MONS. PAUL BALBAUD.

*German, Italian and Spanish*—MADAME NATALIE GILLMAYR.

*Philosophy of Expression, Literature, Interpretation, Public Speaking, Debating, Voice Culture, Dramatic Art, Monologue, Psychology—*FRANK HOME KIRKPATRICK, PH.D., (Lecturer in Public Reading and Speaking at Knox College and McMaster University), Principal, Conservatory School of Expression.

*Vocal Expression, Physical Culture, Harmonic Training, Phonetics, Interpretation—*BEATRICE M. WELLINGTON, A.T.C.M.

*Children's Classes, Private Teaching, Voice Culture, Physical Culture—*MAUDE E. GILLMAN, A.T.C.M., Post-Graduate.

*Evening Classes in Voice Culture, Expression, Public Speaking, Dramatic Art—*GEORGE F. HAYDEN, A.T.C.M., Post-Graduate.

## THE HAMILTON CONSERVATORY OF MUSIC

The Hamilton Conservatory of Music, instituted in 1897 and incorporated in 1904, is affiliated with the University of Toronto. Its building is situated at 126-132 South James Street, Hamilton, Canada. Each season of forty weeks opens in September and closes with the following June. The courses of study for graduation are those laid down in the Curricula of Music of the University as found between pages 552-631 of this Calendar. Students are prepared for all the examinations and degrees in music of the University of Toronto. In addition to these a special course is given for teachers.

### Teaching Staff

*Pianoforte*—JESSIE MORTON, PERCIE SMELSER, RETA BARTMANN, ETHEL LUTTRELL, MARJORIE INSOLE, ANN PENNINGTON, DOROTHY WADE, IRENE M. RUSSELL, EDITH CROWLE, EMMA BARTMANN, LILLIE M. W. PEENE, INA SPRINGER, ELIZABETH HERALD, NELLIE HAMM, ANNA C. LAIDLAW, CLARA MORRIS, J. E. P. ALDOUS, A. G. ALEXANDER, W. H. HEWLETT.

*Voice*—ROBERT SYMMERS, MDME. J. SHIRLEY JACKSON, MRS. H. MAXWELL MORROW, HOWARD M. FREDERICK, BRUCE A. CAREY.

*Theory*—J. E. P. ALDOUS, B.A., A. G. ALEXANDER, W. H. HEWETT, MUS. BAC.; NELLIE M. HAMM, F.T.C.M., MUS. BAC.; EMMA B. BARTMANN, A.T.C.M.; B. INA SPRINGER.

*Organ*—J. E. P. ALDOUS, B.A., A. G. ALEXANDER, W. H. HEWLETT, MUS. BAC., NELLIE M. HAMM, F.T.C.M., MUS. BAC., LILLIE M. W. PEENE, A.T.C.M., CLARA E. MORRIS, L. Univ. Tor.

*Violin*—FRANK E. BLACHFORD, JEAN E. M. HUNTER, JEAN PENNINGTON.

*Violoncello*—EDOUARD A. BARTMANN.

*Sight-Singing Class and Chorus Practice*—JAMES JOHNSTON.

*Expression*—CLARA SALISBURY, MINNIE HIND, A.T.C.M.

*Art*—MISS MARION E. MATTICE, O.S.A.



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## APPENDIX

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## FACULTY OF ARTS.

## REGISTER OF STUDENTS, 1913-1914.

## Candidates for Ph.D.

Beatty, S. ....	Toronto.	McFarlane, Miss J. ....	Toronto.
Burt-Gerrans, J. T. ....	Toronto.	McIntyre, E. A. ....	Toronto.
Cacciapuoti, N. ....	Toronto.	McNairn, W. H. ....	Toronto.
Collip, J. B. ....	Belleville.	Mueller, P. W. ....	Toronto.
Cooper, A. R. ....	Toronto.	O'Sullivan, P. M. ....	Toronto.
Cudmore, S. A. ....	Toronto.	Parsons, A. L. ....	Toronto.
Duncan, J. H. ....	Toronto.	Potter, W. A. ....	Toronto.
Farrill, F. G. ....	Kenilworth.	Pratt, E. J. ....	Toronto.
Fraser, C. G. ....	Toronto.	Reid, J. E. ....	Toronto.
Funnell, W. S. ....	Toronto.	Reid, R. A. ....	Toronto.
Graham, G. H. ....	Toronto.	Robertson, A. D. ....	Everton.
Graham, W. C. ....	Toronto.	Ryerson, Miss C. G. S. ....	Orillia.
Huntsman, A. G. ....	Toronto.	Waddington, Miss M. M. ....	Toronto.
Liddy, R. B. ....	Brantford	Watt, J. C. ....	Toronto.

## Candidates for M.A.

Adams, S. M. ....	London.	Evans, W. W. ....	Owen Sound.
Ainsworth, F. ....	Hamilton.	Fairbairn, R. M. ....	Toronto.
Althouse, J. G. ....	London.	Flesher, E. H. G., Vancouver, B.C.	
Atkin, Miss E. L. ....	St. Thomas.	Gane, F. E. ....	Winnipeg, Man.
Barraclough, W. W. ....	Sarnia.	Goldstick, I. ....	Toronto.
Batchelor, Miss E. G. ....	Brantford.	Goodyear, H. J., Grand Falls, Nfd.	
Bellisle, H. S. ....	Toronto.	Graham, W. ....	Crewson's Corners.
Berkinshaw, R. C. ....	Toronto.	Harstone, Miss J. E., Peterborough.	
Black, A. E. ....	Cooksville.	Hately, J. ....	Brantford.
Boyle, V. O. ....	Port Colborne.	Hazen, A. C., Walsingham Centre.	
Brandt, H. R. ....	Berlin.	Henderson, J. P. ....	Ballinafad.
Breadon, L. H. M. ....	Toronto.	Howell, J. H. ....	Welland.
Brownlee, H. J. ....	Toronto.	Howitt, A. H. ....	Hamilton.
Buchanan, F. G. ....	Calgary, Alta.	Hutcheson, H. O. ....	Huntsville.
Burgess, K. E. ....	Burgessville.	Jeanneret, F. C. A. ....	Toronto.
Burt-Gerrans, J. T. ....	Toronto.	Judd, W. W. ....	Hamilton.
Caldwell, Miss K. M. ....	Toronto.	Kennedy, S. A. ....	Agincourt.
Carter, Miss C. L. ....	Port Colborne.	Keys, Miss V. I. ....	Toronto.
Catalano, M. ....	Toronto.	Kilpatrick, Miss D. H. ....	Toronto.
Chesnut, Miss R. K. ....	Toronto.	Kingston, G. F. ....	Prescott.
Clarke, H. A. E., Kingston, Jam.,		Latimer, G. W. ....	Brockville.
B.W.I.		Little, W. J. ....	Toronto.
Colclough, J. H. ....	Lloydtown.	Lloyd, G. S. ....	King.
Cotton, J. H. ....	Toronto.	Lucas, J. F. ....	Markdale.
Davidson, W. A. ....	Cooksville.	Martin, E. A. H. ....	Hamilton.
Ditchburn, J. S., Rosseau, Muskoka.		Maunsell, E. F. ....	Port Arthur.
Dykes, P. J. ....	Toronto.	Miller, A. M. ....	Toronto.
Edmonds, T. B. ....	Toronto.	Miller, J. W. ....	Munson, B.C.
Edwards, Miss E. ....	Toronto.	Muir, M. F. ....	Brantford.
Ellsworth, H. V. ....	Ridgeway.	Mutch, J. M. G. ....	Toronto.
Evans, G. E. ....	Toronto.	McKenna, Miss B. J., St. Thomas.	

McKenzie, A. P.....	Kobe, Japan.	Qua, N. C. ....	Paris.
MacIachlan, Miss I. P....	Toronto.	Raney, E. F.....	Toronto.
McLennan, Miss H. E....	Vittoria.	Roberts, H. L. ....	Jarvis.
McLeod, A. R.....	Toronto.	Rubidge, C. R.....	Dixie.
MacNiven, W. E....	Edmonton, Alta.	Robins, J. D.....	Windsor.
McQueen, J. ....	Mount Forest.	Ross, W. A.....	Embro.
Neff, Miss R. K.....	Toronto.	Sanderson, O. N.....	Toronto.
Nicholson, Miss E. E....	Toronto.	Smith, A. F.....	Galt.
Nicholson, H. L.....	Toronto.	Smith, A. L.....	Drayton.
Ockley, Miss L. L.....	Toronto.	Smith, J. R.....	Harrow.
Oliver, M. J.....	Toronto.	Smith, M. P.....	Hickson.
Owen, A. E.....	Chatsworth.	Stevens, Miss M. H. .	Bowmanville.
Park, A. P.....	Toronto.	Sykes, Miss H. I.....	Toronto.
Platt, H. E. B.....	Toronto.	Taylor, A. E.....	Hollis, N.Y.
Potter, W. A.....	Toronto.	Trotter, Miss E. E....	Toronto.
Pound, A. N. C.....	Vernon, B.C.	Wallace, W. F.....	Toronto.
Pounder, I. R.....	Peimbroke.	Wodehouse, R. P.....	Toronto.
Priest, A. H.....	Owen Sound.		

### Occasional Students.

*Atkinson, R. G.....	Scarboro.	Hume, W. B.....	Toronto.
Benedict, J. C. New Brunswick	N.J.	Laidlaw, Miss M. C.....	Toronto.
Carlyle, Miss M. J. (M.A.),	Toronto	Lemon, R. E. ....	Toronto.
Caven, P. N.....	Aylmer West.	McFarlane, Miss R.,	Herschel, Sask.
DeRose, A.....	London, Eng.	Menzie, L. P.....	Sarnia.
Goldstick, I. ....	Toronto.	Moloney, P. J.....	Powassan.
Gooderham, Miss G. A.,	Toronto.	O'Brian, K. B.....	Toronto.
Hanna, Miss L. O.,	Vancouver, B.C.	Simpson, Miss A. L.....	Toronto.
Henderson, Miss G. E....	Toronto.	Weaver, Miss E. C. (B.A.),	Toronto.

\*Attended in the Michaelmas Term.

### Royal College of Dental Surgeons.

Astle, W. W.....	Little Metis, Q.	Dixon, E. R.....	Walkerton.
Barbour, R. M....	Fredericton, N.B.	Elgie, R. W.....	Grand Valley.
Barker, J. C.....	Niigon.	Eby, E. W.....	Waterloo.
Barry, F. H.....	Toronto.	Fauman, A. S.....	Hamilton.
Bechely, F.....	Toronto.	French, H. G.....	Dresden.
Benson, A. E.....	Toronto.	Furlong, F. J.....	Hamilton.
Bent, C.....	New Glasgow, N.S.	Graham, C. C.....	Winnipeg, Man.
Bishop, R.....	Toronto.	Hagey, M. H.....	Preston.
Blackwell, R. W.....	Slade.	Hart, O.....	Craighurst.
Borden, J. M.....	Brandon, Man.	Hoffman, R. W.....	Toronto.
Box, R. M.....	Carleton Place.	Hooley, M. J.....	Wallacetown.
Boyd, A. W.....	Creemore.	Humphreys, E. V....	Allandale.
Brischois, J. O.....	Ottawa.	Hutchinson, T. H....	Aurora.
Brown, J. W. E.....	Caledonia.	Irwin, J. T.....	Campbellford.
Cavanagh, A. E.....	Kinburn.	Jarman, F. S.....	Vancouver, B.C.
Chambers, A.....	Treherne, Man.	Jones A. W.....	Toronto.
Chartrand, W.....	Ottawa.	Kortsman, Miss N....	Toronto.
Collard, C. R.....	Victoria Square.	Larmour, J. G.....	Aylmer, Q.
Coursier, H. L....	Revelstoke, B.C.	Lavine, J. J.....	Toronto.
Coyne, C.....	Learnington.	Lee, G. A.....	Greenbank.
Crozier, A. L.....	Portsmouth.	Legate, H. B. ....	Owen Sound.
Davidson, L.....	Whitfield.	Lipsey, C. H....	Thetford Mines, Que.
Deans, F. M.....	Preston.	Loveridge, W. A.....	Toronto.

Maranda, H. ....	Plantagenet.	Robinson, E. J. ....	Toronto.
Martin, L. ....	Ottawa.	Ryan, J. ....	Campbell's Cross.
Master, W. R. ....	New Hamburg.	Saunders, S. V. ....	Smith's Falls.
Mills, M. C. ....	Schomberg.	Sheehy, R. A. ....	Ottawa.
Morgan, C. E. ....	Aultsville.	Sinclair, W. S. M. ....	Arnprior.
Myles, A. ....	Treherne, Man.	Singleton, G. M. ....	Toledo.
MacLachlan, W. C. ....	Toronto.	Smith, H. E. ....	Regina, Sask.
McCormack, R. A. ....	Toronto.	Stedman, L. R. ....	Perth.
McDowell, K. ....	Shawville, Que.	Stone, R. J. ....	Saintfield.
McNally, H. L. ....	Lynnville.	Sullivan, W. J. ....	Arnprior.
McIntyre, P. ....	Ailsa Craig.	Taylor, R. F. ....	Grand Valley.
McKee, E. C. ....	Toronto.	Truemner, J. E. ....	Dashwood.
Nesbit, P. L. ....	Napanee.	Turner, J. W. ....	North Bay.
Norton, A. L. ....	Warton.	Wicks, A. G. ....	Guelph.
O'Leary, D. A. ....	Tottenham.	Whaley, E. F. ....	Caledonia.
Oliver, E. J. ....	Manitou, Man.	White, S. G. ....	Gravenhurst.
Parr, L. ....	Toronto.	Winn, R. O. ....	Elmira.
Porter, W. A. ....	Smith's Falls.	Wood, R. C. ....	Erin.
Porter, C. ....	Smith's Falls.	Wallace, R. D. ....	Saintfield.
Robb, M. G. ....	Atwood.	Waring, W. F. ....	Toronto.
Robb, E. J. ....	Lochalsh.	Watson, C. H. D. ....	Port Hope.

### Summer Session, 1913.

Airth, Miss E. E. ....	Renfrew.	Buddle, Miss A. ....	Toronto.
Arksey, Miss B. E. ....	Toronto.	Bull, Miss C. I. ....	Weston.
Arnold, C. H. ....	Toronto.	Bulmer, Miss E. J. ....	Toronto.
Allan, D. M. ....	Stratford.	Cairns, Miss A. E. ....	Port Elgin.
Anderson, Miss E. M. ....	Pembroke.	Cale, Miss E. L. ....	Toronto.
Augustine, Miss M. E.,		Campbell, Miss C. L. ....	Rodney.
Port Colborne.		Canning, Miss M. T. ....	Toronto.
Baker, Miss E. M. ....	Toronto.	Carey, Miss V. P. ....	Toronto.
Barlow, Miss M. D. ....	Toronto.	Carolan, Miss D. ....	Toronto.
Barnes, C. H. ....	Toronto.	Carruthers, Miss L. A. ....	Toronto.
Barrans, Miss E. ....	Waubushene.	Carson, Miss E. M. ....	Shelburne.
Baskerville, Miss E. ....	Toronto.	Chevrette, Miss E. ....	Toronto.
Bassford, Miss A. M. ....	London.	Chisholm, R. J. ....	Brampton.
Beattie, W. R. ....	Toronto.	Chown, Miss A. D. ....	Toronto.
Beatty, Miss J. L. ....	Pembroke.	Clarke, B. W. ....	Stouffville.
Beehler, Miss L. ....	Brockville.	Clarry, A. R. ....	Locust Hill.
Bennett, R. F. ....	Oshawa.	Cline, G. A. ....	Appleby.
Benoit, Miss M. A. ....	Ottawa.	Clyde, Miss L. ....	Chatham.
Bertrand, Miss M. A.,		Code, Miss E. M.,	Carleton Place.
Vankleek Hill.		Cole, Miss E. S. ....	Toronto.
Biehl, Miss E. E. ....	Wingham.	Coleman, Miss K. ....	Toronto.
Biehl, Miss M. M. ....	Wingham.	Conover, R. V. ....	Brampton.
Black, Miss H. E. ....	Milton West.	Cook, B. L. ....	Beachville.
Blair, Miss A. E. ....	Toronto.	Cooper, A. B. ....	Shelburne.
Bowman, Miss J. C. ....	Cobalt.	Cote, Miss R. ....	London.
Boyce, N. R. ....	Seaforth.	Cruise, Miss I. ....	Toronto.
Bradt, Miss F. A. ....	Beamsville.	Cummer, Miss E. M. ....	Toronto.
Brassem, Miss S. ....	Toronto.	Cummings, Miss M. ....	Guelph.
Brisbin, Miss M. E. ....	Toronto.	Damude, E. H. ....	Leamington.
Brokenshire, Miss F. A. ....	Lindsay.	Davis, Miss Elizabeth ....	Guelph.
Brosnahan, Miss H. ....	London.	Davis, Miss Ellen. ....	Toronto.
Brown, Miss E. P. ....	Toronto.	Davis, Miss I. E. ....	Toronto.
Brown, Miss M. B. ....	Toronto.	Day, J. W. ....	Stratford.

- Delaney, Miss M. .... Toronto.  
 Dertinger, Miss A. .... Chatham.  
 Desroches, P. .... Toronto.  
 Dingle, Miss C. M. .... Toronto.  
 Douglas, G. A. .... Mount Joy.  
 Doyle, Miss M. .... Toronto.  
 Doyle, Miss A. .... Toronto.  
 Durie, Miss H. F. .... Toronto.  
 Eagan, Miss V. .... Toronto.  
 Eaton, Miss L. .... Toronto.  
 Edwards, H. W. . . . Port Maitland.  
 Edwards, Miss M. A. .... St. Mary's.  
 Eldon, Miss D. E. .... Kintore.  
 Elliott, F. W. .... Guelph.  
 English, Miss A. .... Toronto.  
 Evans, Miss G. B. .... Islington.  
 Fagan, Miss S. Z. .... Cayuga.  
 Fahey, Miss G. E. .... Toronto.  
 Fallas, Miss C. M. .... Brampton.  
 Faul, H. M. .... Windsor.  
 Feeney, Miss H. W. .... Toronto.  
 Ferguson, W. S., .... Priceville.  
 Flynn, Miss M. E.,  
     Niagara Falls, N.Y.  
 Follick, T. H. .... Port Perry.  
 Forbes, Miss E. M.,  
     Niagara Falls, N.Y.  
 Garbutt, A. E. .... Port Perry.  
 Garland, Miss M. .... Guelph.  
 Gerhardt, H. W. .... Tavistock.  
 Gibson, Miss J. R. .... Brockville.  
 Gignac, Miss I. Z. .... Windsor.  
 Gillen, Miss M. A. P. .... Toronto.  
 Gilchrist, J. .... Markham.  
 Gillespie, Miss J. .... Cannington.  
 Gillies, Miss M. B. .... Toronto.  
 Goldberg, Miss R. A. .... Toronto.  
 Goldring, C. C. .... Toronto.  
 Graham, Miss M. .... Chatham.  
 Graham, Miss I. A. R. .... Toronto.  
 Grandy, F. N. .... Toronto.  
 Gollins, Miss E. .... Milton West.  
 Gray, H. .... Bruce Mines.  
 Green, Miss M. E. .... Louise.  
 Greene, P. L. .... Toronto.  
 Gulston, C. S. .... Lefroy.  
 Hamilton, Miss M. G. .... Toronto.  
 Hanes, Miss E. A. .... Toronto.  
 Harmer, Miss E. .... Toronto.  
 Harvey, Miss M. A. .... London.  
 Hayes, Miss M. .... Chatham.  
 Heather, Miss R. .... Guelph.  
 Henderson, H. R. .... Strabane.  
 Hennessey, Miss M. .... London.  
 Hobbs, W. M. .... Birnam.  
 Hodgins, E. P. .... Granton.  
 Hodgins, Miss V. E. M. . . Harpley.  
 Hogarth, J. W. .... Avon.  
 Holmes, Miss L. E. .... Newton.  
 Holmes, Miss V. M. A. . . Cobalt.  
 Hornich, Miss M. .... Ottawa.  
 Howard, Miss V. .... Toronto.  
 Hughes, Miss B. M. . . Woodbridge.  
 Hughes, T. J. .... Toronto.  
 Hurd, Miss L. A. L. .... Toronto.  
 Hussey, Miss E. .... London.  
 Ingoldsby, Miss A. .... Toronto.  
 Ingoldsby, Miss M. .... Toronto.  
 Jennings, Miss L. F. .... Toronto.  
 Jenkins, J. T. .... King.  
 Johnston, Miss B. C. .... Toronto.  
 Johnston, Miss I. .... Drayton.  
 Joyce, A. A. .... Toronto.  
 Kelley, Miss V. .... Toronto.  
 Kelly, Miss U. .... Chatham.  
 Kennedy, Miss M. T. .... Toronto.  
 Kerr, Miss E. C. .... Argyle.  
 Kerr, Miss M. A. .... Berlin.  
 Keys, G. P. .... Horning's Mills.  
 Kidd, Miss E. M. .... Toronto.  
 Kilackey, Miss M. .... Chatham.  
 Kitts, Miss M. A. .... Belleville.  
 Knox, H. .... Lynden.  
 Kottmeier, Miss M. L.,  
     Port Robinson.  
 Lalone, Miss E. .... Toronto.  
 Lane, Miss E. .... Toronto.  
 Lavan, Miss M. E. .... Toronto.  
 Legge, Miss E. .... Toronto.  
 Leonard, Miss A. .... Toronto.  
 Leslie, W. B. .... Guelph.  
 Limin, Miss I. W. .... Toronto.  
 Limin, Miss F. S. .... Toronto.  
 Lougheed, Miss V. B. .... Toronto.  
 Lowry, R. J. .... Toronto.  
 McArdle, Miss E. .... Toronto.  
 McCaffrey, Miss M. B. .... Hamilton.  
 McColman, Miss F. E. .... Gore Bay.  
 McCrohan, Miss L. .... Toronto.  
 MacDonald, T. A. .... Toronto.  
 McDonell, Miss A. W. M., Toronto.  
 MacDonald, D. A. .... Hickson.  
 McDonough, Miss M. .... Toronto.  
 McEwen, F. A. .... Toronto.  
 McFarlane, Miss R.  
     Minitonas, Man.  
 McGill, G. W. .... Toronto.  
 McGillicuddy, Miss A. .... Toronto.  
 McGillicuddy, Miss L. .... Toronto.  
 MacGregor, Miss A. K. .... Almonte.  
 McGuigan, Miss E. E. St. Thomas.  
 McGuire, Miss M. .... Toronto.  
 McIntosh, H. W. .... Toronto.  
 Macintosh, Miss M. .... Toronto.



McKinlay, A. S.....	Toronto.	Perdue, G. E.....	St. Thomas.
McKinlay, Miss M. B...	Tecumseh.	Perrier, Miss M.....	St. Eugene.
McKinlay, Miss J.....	Toronto.	Perry, Miss G. M.....	Toronto.
McLaughlin, Miss M.....	Toronto.	Phelan, Miss C.....	Toronto.
MacLennan, Miss K.....	Toronto.	Pierce, Miss M.....	Toronto.
McQueen, Miss M. M.,	Leamington.	Porter, Miss O.....	Toronto.
McWhorter, T. A.....	Toronto.	Porter, W. A.....	Ravenswood.
Macklin, Miss E. P.....	Toronto.	Proudfoot, R. M.....	Fullarton.
Macklin, Miss O. B.....	Hamilton.	Quarry, Miss M.....	Peterborough.
Mahaffy, A. H.....	Hamilton.	Rabajotti, Miss E. F...	Port Bruce.
Mahon, J. F.....	Aberfoyle.	Rafferty, T. J.....	Toronto.
Mahon, J. A.....	Aberfoyle.	Ralston, Miss F. E.....	Toronto.
Mahon, Miss N. L.....	Rodney.	Rannie, Miss M. R.....	Toronto.
Major, Miss M. T.....	Eramosa.	Ravin, Miss V. A.....	Whitby.
Maloney, Miss F.....	Toronto.	Redmond, Miss A.....	London.
Maloney, Miss K.....	Ennismore.	Reid, Miss A. M.....	Toronto.
Manning, E. D.....	Forest.	Reid, W. T.....	Vallentyne.
Martin, T. W.....	Port Perry.	Readdie, G.....	Toronto.
Melville, Miss J. A.....	Toronto.	Richardson, Miss J. I.,	Janetville.
Messer, Miss C. M.....	Bluevale.	Richer, Miss F.	
Metcalfe G. A.....	St. Thomas.		Lachute d'Argenteuil, Q.
Miller, Miss A. A.....	Rodney.	Rickaby, H. C.....	Barrie.
Miller, Miss M.....	Toronto.	Roberts, Miss M.....	Toronto.
Milne, Miss H.....	Toronto.	Robb, C. W.....	Toronto.
Mitchell, Miss L.....	Toronto.	Robertson, Miss J.....	Menlo, Ga.
Mitchell, Miss M. S....	Newburgh.	Robinson, W. C.....	Melbourne.
Moran, Miss K.....	Alliston.	Robinson, Miss F.....	Toronto.
Morden, Miss F. D.,		Robson, Miss A. L.....	Toronto.
	Niagara Falls.	Rochat, P.....	Toronto.
Morley, Miss D.....	Chesley.	Roche, Miss M.....	Toronto.
Mott, M. W.....	Belleville.	Roddick, R.....	Toronto.
Moreau, Miss O.....	Toronto.	Root, M.....	Belleville.
Morris, Miss T. A.....	Bradford.	Ross, J. C.....	Harriston.
Mowat, Miss L. E.....	Toronto.	Ross, J. F.....	Nanticoke.
Moylan, Miss B.....	London.	Runnings, J. B. C...	Owen Sound.
Murphy, Miss V.....	Chatham.	Runnings, Miss J. M. V.,	
Nattress, Miss E. W.....	Weston.		Owen Sound.
Nelligan, Miss E. M.....	Toronto.	Rutherford, Miss G. L....	Bolton.
Neff, W. A.....	Hamilton.	Ryan, Miss W.....	Peterborough.
Nelson, P. O.....	Bolton.	Ryan, Miss M. A.....	Toronto.
Noble, Miss E. C.....	Meaford.	Sauvé, Miss L.....	Toronto.
Nichol, Miss A. M...	Wilton Grove.	Sayers, J. R.....	Guelph.
Nolan, Miss A.....	Peterboro.	Scholes, J. P.....	Toronto.
O'Brien, Miss E.....	Toronto.	Sexsmith, W. P.....	Napanee.
O'Brien, Miss M.....	London.	Shaw, Miss B. M. C...	'Presqu' Isle.
O'Connell, Miss M. A...	Peterboro.	Shaw, J.....	Owen Sound.
O'Connor, Miss A. A.....	Toronto.	Shaw, Miss V. A.....	Windsor.
O'Donohue, J. A....	Campbellford.	Sheppard, H. N.....	Toronto.
O'Driscoll, Miss F.....	Toronto.	Sherriff, Miss I. G.....	Lucknow.
O'Keefe, Miss E. I.....	Toronto.	Shier, Miss R. A.....	Sunderland.
O'Keefe, Miss K.....	Toronto.	Short, J. A.....	Essex.
O'Malley, Miss F.....	Toronto.	Simpson, Miss A. L...	Owen Sound.
O'Neill, H. S.....	Toronto.	Sinclair, W. T.....	Sarnia.
O'Neill, Miss M. E.....	Toronto.	Skilling, J.....	Teeswater.
Ord, Miss A. L.....	Stratford.	Skilling, Miss M. E....	Teeswater.
Owen, E. W.....	Toronto.	Smith, Miss S. A....	Burk's Falls.
Packer, T.....	Kingston.	Smith, F. N.....	Guelph.



Sonley, Miss M. A....	Prince Albert.	Venini, Miss M.....	Toronto.
Spence, Miss C. R....	Orangeville.	Vickery, C. A. ....	Port Perry.
Sproule, C. J. ....	Toronto.	Villeneuve, Miss Y. .	St. Eugene.
Stanislaus, Sister M. St.		Vining, Miss M. E.....	Thorndale.
	Toronto.	Wagg, J. C. ....	Stouffville.
Starrette, Miss I. J. ....	Toronto.	Walker, A. R. ....	Port Perry.
Stevens, Miss J. ....	Gananoque.	Walker, Miss M. R. ....	Toronto.
Stewart, Miss M. E. ....	Elfrida.	Wall, Miss G. ....	Toronto.
Stewart, R. A. W. ....	Barrie.	Wallace, Miss F. B. North	Osgoode.
Stonehouse, Miss E. J....	Toronto.	Wallace, J. B. ....	Toronto.
Sulkey, Miss M. F.,		Watson, M. F. ....	Aberarder.
	Niagara Falls, N.Y.	Way, A. D. ....	Picton.
Sullivan, Miss C. ....	Toronto.	Webster, Miss F. ....	Toronto.
Sullivan, Miss J. E.,		Weirs, Miss M. ....	Toronto.
	Niagara Falls, N.Y.	West, R. H. A. ....	Angus.
Sweeney, Miss C. ....	Toronto.	White, F. P. ....	Kinkora.
Symington, J. B. ....	Camlachie.	White, L. ....	Port Perry.
Teaffe, Miss A. ....	Toronto.	Wilcox, Miss L. A. ....	Toronto.
Tidd, Miss N. E. ....	Toronto.	Wilker, M. J. ....	Tavistock.
Thomas, Miss R. ....	Red Bay.	Williams, Miss L. ....	Kansas City, Mo.
Trenouth, W. J. ....	Norwood.	Williams, Miss V. G. .	Sunderland.
Troy, Miss H. ....	London.	Wilson, A. C. ....	Brampton.
Tuffy, Miss C. ....	Toronto.	Wilson, J. M. ....	Picton.
Tweed, H. L. ....	Hawkesbury.	Wilson, Miss M. I. ....	Oakville.
Twiss, D. L. ....	Tillsonburg.	Witthun, Miss J. E. ....	Hanover.
Twiss, E. O. ....	Dundas.	Workman, Miss A. J. Brooklyn,	N.Y.
Unger, D. B. ....	St. Williams.	Yates, A. V. ....	Preston.
VanNest, Miss G. M.,	Bowmanville.	Yott, Miss D. F. ....	Chatham.

### Ontario Veterinary College.

#### First Year.

Allan, J. W. ....	Toronto.	Dottin W. C., New York City, N.Y.	
Andrew, A. T. ....	Des Moines, Ia.	Drennan, W. J. ....	Alliston.
Andrew, A. T. ....	Oakville.	Ducey, J. ....	Shepherd, Mich.
Armstrong, G. T. .	Rosburn, Man.	Ducey, L. D. ....	St. Louis, Mich.
Babcock, C. W. North	Fairfield, O.	Edmunds, J. A. ....	Jasper.
Beggs, R. E. ....	Fernbank.	Fasken, J. W. R. ....	Elora.
Bentham, W. G. ....	Enniskillen.	Forbes, H. L. ....	Wyoming.
Bescoby, F. H. ....	Stonewall, Man.	Gallagher, L. J. ....	Elroy, Wis.
Black, A. S. ....	Yorkton, Sask.	Gibson, H. H. ....	Newport, N. S.
Bowerman, R. J. .	Weyburn, Sask.	Gleason, J. L. ....	Lakeside.
Bowie, J. S. ....	Winnipeg, Man.	Goss, R. C. ....	West Danville, Vt.
Brent, S. J. ....	Wyoming.	Graves, A. J. ....	Syracuse, N.Y.
Brinsmead, H. ....	Marengo, Sask.	Gwatkin, R. ....	Earl Grey, Sask.
Carey, M. L. ....	Millgrove.	Hannigan, R. ....	Vernon, N.Y.
Carmicheal, B. T. ....	Sudbury.	Harding, A. ....	Jerseyville, Ill.
Catt, R. B. ....	Forest.	Heffron, J. L. ....	Toronto.
Conlin, J. E. ....	Hartford, Conn.	Henderson, G. D. .	Carberry, Man.
Corbett, C. C. .	Crystal City, Man.	Heslop, C. H. ....	Appleby.
Corbett, E. R. ....	Rosser, Man.	Hill, E. M. ....	Carholme.
Croft, W. ....	Tavistock.	Houston, D. G. ....	Vancouver, B.C.
Davis, H. T. ....	Woodstock.	Johnston, W. H. ....	Brigden.
Dill, W. I. ....	Newport, N.S.	Jull, G. N. ....	Norwich.
Dolan, T. P. ....	Mt. Rose, Pa.	Keddy, C. A. ....	Dartmouth, N.S.
Donovan, L. A. .	Cold Brook, N.B.	Kee, W. J. ....	St. John, N.B.

Kerr, J. P. ....	Burns.	Owen, E. R. ....	Friendsville, Pa.
Kelleher, J. S. ....	Arthur.	Page, A. E. ....	Glenella, Man.
Laitinen, E.,		Pickup, E. S. ....	Cattaraugus, N.Y.
North Colebrook, Conn.		Richardson, C. H. ....	Marengo, Sask.
Lawrence, G. C. ....	Myrtle.	Robertson, W. A. ....	Tiny, Sask.
Lay, R. H. ....	Alameda, Sask.	Robinson, A. E. ....	Youngstown, N.Y.
Lee, R. M., Jr. ....	Yorkton, Sask.	Robinson, L. R. ....	Evans City, Pa.
Lehman, A. W. ....	Victoria, B.C.	Romasser, E. J. ....	Attica, N.Y.
Leishman, L. ....	Cardston, Alta.	Roth, L. H. ....	Greenville, Pa.
Libby, R. E. ....	Richmond, Me.	Salisbury, E. ....	Toronto.
McDougal, W. F. ....	Yorkton, Sask.	Schmidt, L. H. ....	New Bremen, O.
McKee, S. C. ....	Drumheller, Alta.	Shaw, W. J. ....	Killarney, Man.
McKeon, M. G. ....	Fenton, Mich.	Shumway, C. S. ....	Bradford, Vt.
MacLeod, A. H. ....	Camlachie.	Shull, G. H. ....	Horatio, Ark.
McMurray, G. H. ....	Churchville, N.Y.	Siemer, C. E. ....	Moose Lake, Minn.
Mackie, C. ....	Mt. Eden, Aucklands.	Smith, F. W. B. ....	Vancouver, B.C.
Malm, A. J. ....	Wetaskiwin, Alta.	Spearman, E. ....	Stittsville.
Martindale, E. C. ....	Coleman, Mich.	Stafford, N. J. ....	Montreal, Q.
Maxwell, F. E. ....	Brentwood.	Stanford, O. H. ....	Randolph, Pa.
Meehan, L. L. ....	LeBret, Sask.	Taylor, M. H. ....	Oak Lake, Man.
Millar, J. L. ....	Asquith, Sask.	Tumin, A. G. ....	Onondaga, N.Y.
Mitchell, A. F. ....	Yorkton, Sask.	Ungar, E. B. ....	Napanee.
Morgan, H.,	Dingman's Ferry, Pa.	Ward, H. E. ....	Pittsfield, Me.
Morrison, W. L. ....	Weir, Que.	Wood, F. ....	Wildfield.
Nicholson, J. O. ....	Peterville.	Wood, W. H. ....	Baldur, Man.
O'Brien, W. P. ....	Elmsdale, P.E.I.	Wolff, H. ....	Valcartier, Q.
Osman, R. F. ....	Halifax, N.S.		

### Second Year.

Armstrong, W. E. ....	Flimsby, Eng.	Dunn, J. ....	Angus.
Ash, H. E. ....	Napoleon, O.	Edwards, C. L. ....	Brandon, Man.
Babcock, F. M. ....	Jamestown, N.Y.	Ellah, J. N. ....	Nortonville.
Bailey, J. W. ....	Bowling Green, O.	Ellsworth, L. H. ....	Marshville.
Batt, H. E. ....	Toronto.	Faivre, C. F. ....	Latrobe, Pa.
Bishop, H. H. ....	Ottawa.	Flanders, C. M. ....	Mohawk.
Boswell, W. H. ....	Westboro, Mass.	Ford, L. B. ....	Vernon, N.Y.
Bovaird, J. Jr., ....	Brampton.	Foster, R. H. ....	Hyndford.
Boyce, A. J. ....	St. John, N.B.	Frayn, G. G. ....	Forest.
Boyd, C. T. ....	London.	Fox, R. G. ....	Millington.
Brand, J. M. ....	Stavely, Alta.	Gibson, A. B. ....	Govan, Sask.
Brazenall, F. ....	Sully, Q.	Hill, W. R. ....	Drake, Sask.
Brown, J. C. ....	Toronto.	Hodgson, H. H. ....	Haydon.
Brown, L. A. ....	Toronto.	Hotchkiss, T. F.,	
Browne, G. N. ....	Toronto.	Murrayfield, Scotland.	
Bright, W. H. ....	Forest.	Hudson, C. ....	Zealandia, Sask.
Cameron, A. R. ....	Vegreville, Alta.	Huston, W. ....	Carman, Man.
Campbell, J. N. ....	Clinton, Ill.	James, R. T. ....	Carp.
Carson, M. ....	Rosburn, Man.	Jaques, J. ....	Simcoe.
Childs, T. ....	Stavely, Alta.	Jose, G. H. ....	Kirkton.
Christian, O. ....	Drayton.	Kenney, P. W. ....	Oberlin, O.
Cunningham, C. G.		Kenney, W. G. C. ....	Acton.
Tatamagouche, N.S.		Kerr, S. S. ....	Crystal City, Man.
Cunningham, J. R.	Bayhead, N.S.	Love, B. I. ....	Ashburn.
Dennis, M. C. ....	Detroit, Mich.	McCarthy, J. R. ....	Fenton, Mich.
Donahoe, A. A. ....	Scranton, Pa.	McDonald, D. ....	Grand River, P.E.I.
Dowdle, J. H. ....	Orid, N.Y.	McDonald, D. W. ....	Tyvan, Sask.

## APPENDIX

McFarlane, A. M.,	Winnipeg, Man.	Shepherdson, J. S. . . . .	Walter's Falls.
McGee, H. . . . .	Lemberg, Sask.	Smith, F. D. . . . .	Coronation, Alta.
McMaster, D. A. . . . .	Laggan.	Snyder, O. A. K. . . . .	Brampton.
Manchester, W. . . . .	Huntley.	Spearman, W. . . . .	Stittsville.
Moore, B. O. . . . .	Telford, Tenn.	Spurr, S. F. . . . .	Round Hill, N.S.
Mumford, J. E. . . . .	Toronto.	Stanford, J. A. . . . .	Dartmouth, N.S.
Neely, M. J. . . . .	Lemberg, Sask.	Stanhope, R. B. . . . .	Whiting, Me.
Parmiter, F. . . . .	Edmonton, Alta.	Steeves, H. W. . . . .	Albert Mines, N.B.
Quirk, J. A. . . . .	Ware, Mass.	Stieg, R. E.,	
Ray, B. W. . . . .	Dauphin, Man.		North Tonawanda, N.Y.
Reichley, J. R., . . .	Kratzerville, Pa.	Stump, M. L. . . . .	Robeson, Pa.
Reed, D. V. . . . .	London, Eng.	Thomas, A. E. . . . .	Holmfield, Man.
Reid, J. G. . . . .	Brulé Shore, N.S.	Thompson, C. . . . .	Picton.
Robertson, A. . . . .	Beachburg.	Todd, R. C. . . . .	Vernon, N.Y.
Rooks, A. L.,		Tracy, O. G. . . . .	Apalachin, N.Y.
	Port of Spain, Trinidad.	Welbanks, H. . . . .	Milford.
Rose, C. A. . . . .	Picton.	Williams, J. E. . . . .	Sunderland.
Scott, J. D. . . . .	Scotstown, Q.	Wood, W. R. . . . .	Summerside, P.E.I.
Sharpe, F. H. . . . .	Gull Lake, Sask.	Younghusband, H. M.	South March.
		Zimmerman, E. R.,	Selinsgrove, Pa.

### Summary.

Candidates for Ph.D. . . . .	28
Candidates for M.A. . . . .	96
Occasional Arts Students. . . . .	18
Dental Students. . . . .	88
Summer Session. . . . .	338
Ontario Veterinary College. . . . .	189
Total. . . . .	<hr/> 757

## UNIVERSITY COLLEGE.

## First Year.

\* Indicates that the Student attended in the Michaelmas Term only;  
† in the Easter Term only; ‡ dispensation during the session.

Allen, H. M.....	Toronto.	Carlyle, D. B.....	Toronto.
Allen, S. H.....	Toronto.	Carrie, Miss V. G....	Owen Sound.
Anderson, J. E.....	Forest.	Cassels, H., Jr.....	Toronto.
Anderson, J. F.....	Forest.	Cavill, A. H.....	Collingwood.
Anderson, J. O.....	Toronto.	Cieman, S.....	Toronto.
Anderson, N. M.....	Guelph.	*Clewes, H. R.....	Ottawa.
Arland, L. J.....	Hamilton.	Cohen, Miss C.....	Toronto.
Bach, E. R.....	Toronto.	Cordingley, Miss A. M....	Toronto.
Ballantyne, L. R.....	Atwood.	*Crockard, Miss M. I.....	Forest.
Banbury, L. A....	Wolseley, Sask.	Davidson, Miss A. K....	Alliston.
Barclay, Miss M. L.....	Toronto.	Decker, A. C.....	Hamilton.
Batten, W. H.....	Toronto.	Devlin, H. L.....	Toronto.
Beckett, Miss F. M.....	Toronto.	Dingle, Miss M. C.....	Toronto.
Begg, Miss K. G.....	Toronto.	Dinsmore, H. B.....	Thornbury.
Bell, G. L.....	Oro Station.	Doane, A. J.....	Queensville.
Benson, G. C.....	London.	Donley, H. G.....	Toronto.
Bere, G. S.....	London.	Douglas, D.....	Toronto.
Black, Miss L. M.....	Toronto.	Douglas, M. L.....	Woodstock.
Blanchard, Miss M. C....	Hamilton.	Draper, H. C.....	Toronto.
Bogue, Miss F. J. C.,		Drew, G. A.....	Guelph.
	Moose Jaw, Sask.	Duffield, A. E.....	Kirkton.
Bogue, Miss G. L.,		Dunn, H. S.....	Leamington.
	Moose Jaw, Sask.	Ellis, J. W.....	Doaktown, N.B.
Boltê, A. A.....	Toronto.	Evans, G. T.....	Bradford.
Bond, Miss G. G.....	Galt.	Ewan, Miss M. E.....	Toronto.
Boyd, Miss H. E.....	Toronto.	Ferguson, A. G.....	Toronto.
Brebner, J. B.....	Toronto.	Ferguson, J. R.....	Blackstock.
Brigden, Miss M. F. E....	Toronto.	Fergusson, N. C.....	Toronto.
Bright, A. E.....	Toronto.	Findlay, Miss E. C.....	Toronto.
Brisson, Miss A. J....	Ridgetown.	Fisher, W. S.....	Toronto.
*Brown, A. F....	Winnipeg, Man.	Flavell, J. E.....	Toronto.
*Brown, H. P.....	Hamilton.	Flock, J. A.....	Burlington.
Brown, Miss P.....	Brantford.	Flynn, F. J.....	St. Catharines.
Bryce, Miss J. A.....	Ottawa.	Forrester, Miss G. E. F.,	
Buchanan, H. C.....	Toronto.		Vancouver, B.C.
Bullock, J. C.....	St. John, N.B.	Fowler, Miss E. I.....	Perth.
Bulmer, H. R.....	Toronto.	Fox, H. G.....	Toronto.
Butler, R. B.....	Chatham.	Franklin, Miss M. M.,	Port Rowan.
Cale, Miss O. B.....	Paris.	Frost, Miss R. A.....	Hamilton.
Campbell, A. D.....	Keyser.	Fryer, H. C.....	Fort William.
Campbell, C. D.....	Marshville.	Fuller, D. S.....	Forest.
Campbell, L. G.....	Toronto.	Galbraith, Miss F. P.	Bridgeburg.
Campbell, Miss M. M....	Toronto.	Gardiner, F. G.....	Toronto.
Campbell, O. H.....	Toronto.	Garratt, P. C.....	Toronto.
Campbell, Miss P. M....	Toronto.	Garvin, J. M.....	Toronto.
Carley, A. B.....	Toronto.	Geddes, W. F.....	Kinburn.
Carley, T. J.....	Fenelon Falls.	‡German, P. B.....	Welland.
Carleton, E. A.....	Money more.	Gibson, H. G.....	Toronto.



- Gillies, Miss A. M.....Stratford.  
 Givens, H. F.....Beaverton.  
 Glass, J. J.....Toronto.  
 Glendinning, S. H.....Sunderland.  
 Glover, C.....Hessle, Eng.  
 Gosse, R. J.....Kerrisdale, B.C.  
 Grant, Miss E.,  
     Port of Spain, Trinidad.  
 Greene, Miss G. E.....Toronto.  
 \*Gregory, G. S.....Toronto.  
 Grierson, Miss P. A.,  
     Edmonton, Alta.  
 Grummett, W. J...Proton Station.  
 Hall, F. E.....Burketon Junct.  
 Hamilton, K. B.....Toronto.  
 Hammond, G. S.....Crosshill.  
 Hanley, E. G. S.....Midland.  
 Hardy, Miss F. S.....Toronto.  
 Hargreaves, Miss E. A. S. Toronto.  
 Harkness, N. D....Regina, Sask.  
 Harrison, Miss E....Port Stanley.  
 Harrity, J. J.....Fort William.  
 Hayes, C. F.....Barrie.  
 Heighington, G.....Toronto.  
 Hewson, W. H...Penetanguishene.  
 Holmes, Miss J.....Toronto.  
 Hooey, J. E.....Blackstock.  
 Horton, A. H.....Toronto.  
 Howell, E.....Jerseyville.  
 Isaac, J.....Dromore.  
 Jackson, Miss L. M.....Toronto.  
 Jackson, W. A.....Batteau.  
 Jeffrey, H. G. S.....Guelph.  
 Jenkins, W. S.....King.  
 Jones, Miss M. I.....Toronto.  
 Kendall, Miss S. M.....Oakville.  
 Kennedy, Miss M. I.....Arthur.  
 Keys, Miss E.....Toronto.  
 Kinnear, Miss H. A., Port Colborne.  
 King, Miss M. C.....Bowmanville.  
 Kirkpatrick, Miss E. L...Hamilton.  
 Kirkpatrick, G. D.....Toronto.  
 \*Lajoie, T. E.....Cobourg.  
 Langford, A. C.....Granton.  
 Langlois, Miss R.....Toronto.  
 Latchford, S. B.....Toronto.  
 Laurier, R.....Ottawa.  
 Lawrence, H.....Toronto.  
 Leckie, C. S.....Brussels.  
 Leonard, J.....Toronto.  
 Levetus, Miss D.....Toronto.  
 Lewis, Miss A. M.....Toronto.  
 Lewis, E. O.....Toronto.  
 Lindsay, Miss V. M...North Bay.  
 Litster, K. I.....Toronto.  
 Lobb, Miss A. M.....Toronto.  
 Lowrie, R. J.....Millbank.  
 McCarter, A. B...Dawson, Yukon.  
 McClure, Miss J. R.....Toronto.  
 McCuaig, D. F.....Shanty Bay.  
 Macdonald, W. M...Southampton.  
 McEown, I.....Toronto.  
 McFadden, A. T.,  
     Penetanguishene.  
 McFarland, Miss C. I., Brantford.  
 MacFarlane, M. B.....Almonte.  
 MacFarlane, U.....Toronto.  
 Mackay, Miss H. J., Owen Sound.  
 MacKay, R. A.....Woodville.  
 McKay, R. R.....Hamilton.  
 McKay, W. A.....Calgary, Alta.  
 MacKenzie, D. F.,  
     Changtefu, N. China.  
 McLaren, Miss A. G....Toronto.  
 Maclaren, J. R.....Brockville.  
 McLellan, R. F.....Toronto.  
 McLellan, Miss W. H....Toronto.  
 McLennan, S. A...Vancouver, B.C.  
 McLeod, D. V.....Toronto.  
 McMaster, Miss M. H., Windsor.  
 McMurray, N. A...Niagara Falls.  
 McNair, Miss A. A....Elgin Mills.  
 McPhee, J. E.....Ophir.  
 McPherson, Miss E. L...Exeter.  
 McQuarrie, D.....Argyle.  
 McRae, D. A.....Toronto.  
 McRae, Miss D.....Beaverton.  
 McVittie, Miss I.....Sudbury.  
 Main, Miss A. I.....Hamilton.  
 Malone, M. E.....Toronto.  
 Mark, A. E.....Parkhill.  
 Marsh, Miss C. E.....Lindsay.  
 Matthews, G. S....Peterborough.  
 Maxwell, Miss L. B....Stratford.  
 Meadows, Miss D. E....Toronto.  
 Meyer, G. E.....Brownsville.  
 Mitchell, Miss E. M.....Toronto.  
 Mitchell, Miss J. A...Niagara Falls.  
 Moffat, W. W.....Teeswater.  
 Moon, H. R.....Sydenham.  
 Moore, C. F.....Meaford.  
 Moore, L. J.....Brantford.  
 Mortimer, Miss E. N. L...Toronto.  
 Morton, F. V.....Toronto.  
 Mowat, H. A.....Galt.  
 Muldrew, Miss A. I.,  
     Red Deer, Alta.  
 Mulholland, D. B.....Toronto.  
 Munns, Miss A. B.....Peoria, Ill.  
 Murray, Miss A. D....Hastings.  
 Murray, Miss E. B.....Hastings.  
 Murray, L. M.....Toronto.  
 Newman, T. C.....Toronto.  
 O'Connor, J. J., Jr.....Toronto.



Ogden, C. E. ....	Mimico Beach.	Smith, W. H. ....	Leicester, Eng.
Ormsby, G. Y. ....	Toronto.	Sneath, Miss C. M. ....	Toronto.
Overend, W. J. ....	Toronto.	Snider, Miss M. G. ....	Dunnville.
Owen, T. ....	Toronto.	Snow, G. A. ....	Toronto.
Park, Miss E. W. ....	Toronto.	Stanbury, Miss F. M. ....	Toronto.
Park, Miss R. M. ....	Toronto.	Stauffer, Miss M. M. ....	Toronto.
Pearce, J. A. ....	Brantford.	Steele, Miss K. R. ....	Stratford.
Peebles, Miss G. E. ....	Colborne.	Stewart, Miss H. ....	Toronto.
Phillips, Miss M. R. ....	Toronto.	Stinson, A. R. ....	Toronto.
Philpott, E. ....	Hamilton.	Stone, L. ....	Toronto.
Potter, Miss R. ....	Toronto.	Stone, R. S. ....	Chatham.
Potvin, J. E. ....	Midland.	Stratton, W. W. ....	Peterborough.
Pratt, E. R. I. ....	Stittsville.	Stronach, E. W. G. ....	Toronto.
Preston, G. A. ....	Toronto.	Strong, Miss E. M. ....	Hamilton.
Primrose, H. P. ....	Toronto.	Swift, T. L. ....	Watford.
Pugsley, F. A. ....	Toronto.	Sydie, J. E. ....	Toronto.
Quinlan, Miss F. M. ....	Barrie.	Taylor, E. H. ....	Toronto.
Quinn, Miss E. L. ....	Kincardine.	Taylor, Miss G. V. ....	Toronto.
Ratliffe, J. H. ....	Atwood.	*Thomas, R. M. S. ....	Bracebridge.
Reid, Miss M. J. ....	Toronto.	Thompson, E. ....	Elm Grove.
Redman, E. H. ....	Birchcliffe, P.O.	Thompson, Miss M. F. ....	Toronto.
Reed, Miss E. J. ....	St. Catharines.	Thomson, E. W. ....	Dobbingtown.
Richardson, C. C. ....	Toronto.	Thomson, Miss H. S. ....	Pictou, N.S.
Robertson, W. N. ....	Stratford.	Tillson, V. H. ....	Tillsonburg.
*Robinson, F. ....	Toronto.	Tytler, Miss M. D. ....	Toronto.
Robinson, Miss V. A. ....	Toronto.	Von Pirch, Miss L. ....	Toronto.
Ross, J. H. ....	Boharm, Sask.	Wain, G. E. ....	Tara.
Ross, J. W. ....	Stratford.	Walker, G. E. ....	Toronto.
Ross, Miss R. ....	Ottawa.	Wallace, Miss O. ....	Toronto.
Rowan, H. R. ....	Orton.	Wallace, Miss V. A. ....	Toronto.
Rowlands, H. E. ....	Hamilton.	Walter, R. A. ....	Saltford.
*Ryerson, A. C. ....	Toronto.	Walton, Miss H. L. ....	Toronto.
Ryerson, W. ....	Brantford.	Ward, F. L. ....	Pictou.
Salkeld, C. D. ....	Porcupine.	Wardlaw, N. ....	Brampton.
Saunders, K. H. ....	London, Eng.	Warren, P. A. ....	Sault Ste. Marie.
Saunders, L. B. ....	Toronto.	Wasson, E. L. ....	Young's Cove Road.
Scott, Miss M. M. ....	Toronto.	Waugh, Miss V. A. ....	Toronto.
Scott, Miss R. V. ....	Toronto.	Weatherhead, Miss F. ....	Toronto.
Sharp, J. G. ....	Toronto.	Weir, C. ....	Sarnia.
Sharpe, Miss M. ....	Toronto.	Weismiller, H. D. ....	Toronto.
Shaw, G. S. ....	London.	Wessels, Miss M. L. ....	Toronto.
Shaw, W. R. ....	Toronto.	Westman, Miss L. E. ....	Toronto.
*Sheridan, W. E. ....	Brockville.	White, Miss M. O.,	
Shrum, G. M. ....	Smithville.		Niagara Falls, N.Y.
Shuel, B. D. ....	Paquette Station.	Whitelock, S. G. ....	Woodstock.
Sifton, W. V. ....	Ottawa.	Wiley, Miss N. R. ....	Toronto.
Silverman, S. ....	Sudbury.	Williams, Miss G. E. ....	Tillsonburg.
Simpson, A., West Hartleford, Eng.		Wilson, W. R. ....	Drumbo.
Sinclair, A. W. R. ....	Toronto.	Winhold, E. P. ....	Tavistock.
Sinclair, Miss E. A. ....	Guelph.	Wood, Miss, I. M. ....	Toronto.
Smith, E. C. ....	Rock Mills.	Wood, Miss J. S. ....	Sarnia.
Smith, F. H. ....	Toronto.	Wright, B. ....	Toronto.
Smith, Miss G. H. ....	Toronto.	Zumstien, R. V. ....	Elcho.
Smith, W. F. ....	Toronto.		

## Second Year.

Acheson, C. S. ....	St. Mary's.	Davidson, L. L. ....	Regina, Sask.
Alt, H. ....	Bracebridge.	d'Avignon, Miss H. E. ....	Windsor.
Anderson, Miss P. A. ....	Toronto.	Davis, R. E. G. ....	Toronto.
Angus, Miss G. C. ....	Toronto.	Dickson, C. S. ....	Niagara Falls.
Auld, J. C. ....	Toronto.	Dickson, W. B. ....	Niagara Falls.
Auld, Miss A. R. ....	Toronto.	*Dingle, G. E. ....	Brockville.
Austin, W. E. ....	Port Hope.	Dobson, H. V. ....	Fordwich.
Austin, Miss M. I. ....	Toronto.	Douglas, Miss A. ....	Dunnville.
Baillie, Miss G. S. T. ....	Toronto.	†Downer, H. ....	Penetanguishene.
Banbury, F. E. ....	Regina, Sask.	Dow, Miss M. R. ....	Toronto.
Bateman, Miss L. M. ....	Toronto.	Drummond, H. ....	Toronto.
Batten, L. C. R. ....	Saskatoon, Sask.	Duff, G. H. ....	Hamilton.
Bell, K. C. ....	Toronto.	Evans, W. D. ....	Toronto.
Bell, J. W. ....	Windsor.	Fassel, E. G. ....	Toronto.
Bell, Miss M. D. ....	London.	Ferrier, V. A. ....	Mimico.
Bentley, A. W. ....	Sarnia.	†Fisher, J. C. ....	Dundas.
Berry, G. H. ....	Strathmore, Alta.	Flood, H. W. ....	Harrow.
Biggar, E. L. ....	Mohawk.	Forsyth, R. A. ....	Toronto.
Blackhall, Miss O. M. ....	Toronto.	Foster, Miss A. W. ....	Scotland.
Blagdon, Miss M. G. ....	Toronto.	Frank, Miss A. I. ....	Brampton.
Boltê, F. O. ....	Toronto.	Fraser, Miss C. J. ....	Toronto.
Bowers, Miss G. M. ....	Mongolia.	Frederick, C. M. ....	Campbellford.
Boyd, Miss S. N. ....	Toronto.	Gaiser, Miss E. M. ....	Crediton.
Boyle, Miss M. ....	Toronto.	Ganton, H. B. ....	Toronto.
Bradshaw, W. J. ....	Toronto.	Gardiner, H. M. ....	Regina, Sask.
Breadle, H. A. ....	Waterloo.	Gardiner, S. D. ....	Toronto.
Brandon, Miss N. P. ....	Toronto.	Gibson, G. A. L. ....	Toronto.
Brayley, L. G. ....	Toronto.	Gibson, R. B. ....	Toronto.
Brown, Miss H. C. ....	Toronto.	Gillies, Miss I. ....	Toronto.
Brown, W. E. ....	Winnipeg, Man.	Glover, G. E. ....	Medicine Hat, Alta.
Buchner, Miss F. S. ....	Toronto.	Godfrey, A. W. ....	Northport, N.Y.
Bull, Miss M. J. ....	Weston.	Gordon, E. C. ....	Toronto.
Caldwell, Miss I. E. ....	Toronto.	Gordon, J. A. ....	Toronto.
Cale, C. E. ....	Toronto.	Gordon, J. M. ....	Toronto.
Cameron, H. M. ....	Carluke.	Gordon, M. M. ....	Toronto.
Cameron, J. M. ....	Carluke.	Gower, Miss K. D. ....	Toronto.
Campbell, Miss A. W. ....	Minesing.	Graham, W. T. ....	Toronto.
Campbell, Miss M. G. ....	Toronto.	Gunn, M. G. ....	Toronto.
Campeau, Miss L. J. ....	Harrow.	Gunn, W. A. ....	Toronto.
Carlyle, Miss H. R. ....	Toronto.	Gurofsky, A. M. ....	Toronto.
Carment, W. M. ....	Kamloops, B.C.	Haddow, G. C. ....	Toronto.
Cassidy, Miss I. M. ....	Toronto.	Hall, Miss M. E. ....	Toronto.
Cavell, H. W. ....	Toronto.	Hall, Miss M. S. ....	Port Credit.
Chambers, R. G. ....	Harriston.	Hall, R. C. ....	Calgary, Alta.
Christie, Miss H. W. ....	Orillia.	Hamilton, G. G. ....	Smithville.
Clark, W. ....	Port Elgin.	Hamilton, R. G. ....	Toronto.
Code, G. H. ....	Ottawa.	Hammell, Miss E. E. M. ....	Beeton.
Cooke, C. E. ....	Toronto.	Harkins, H. J. ....	Toronto.
Cooper, Miss C. C. ....	Toronto.	Harrison, W. H. ....	Oshawa.
Copeland, Miss E. S. ....	Collingwood.	Harvie, Miss I. M. ....	Toronto.
Cowan, Miss J. I. ....	Drumbo.	Hearst, W. I. ....	Toronto.
Cowan, Miss M. L. ....	Seaforth.	Henderson, M. R. ....	Windsor.
Craigie, E. H. ....	Toronto.	Henry, J. A. ....	Windham Centre.
Creighton, T. K., Red Willow, Alta.		Hopkins, H. E. ....	Toronto.
Currie, Miss H. W. ....	Toronto.	Hopkins, L. W. ....	Lindsay.
*Cuthbertson, Miss E. ....	Toronto.	Hugill, W. H. ....	Toronto.

Inch, R. F. . . . Mount Hamilton.  
Ireton, H. J. C. . . . Perth.  
Jameson, T. H. . . . Regina, Sask.  
Juno, K. W. . . . Toronto.  
Keeler, Miss J. . . . Toronto.  
Kennedy, A. W. . . . Toronto.  
Kennedy, Miss V. E. . . . Toronto.  
†Kenny, Miss M. B. . . . Ingersoll.  
Kern, C. W. . . . Moose Jaw, Sask.  
Kilbourn, Miss M. M.,  
Calgary, Alta.  
Kingsburgh, J. . . . Toronto.  
Kinnee, H. C. . . . Maple.  
Knight, Miss F. I. . . . Wyoming.  
Lee, Miss M. . . . Hamilton.  
Leitch, W. A. . . . Glencoe.  
Lennox, O. E. . . . Toronto.  
Lewis, A. L.,  
New Westminster, B.C.  
\*Lindsay, L. L. . . . Calgary, Alta.  
Logan, F. A. . . . Niagara Falls.  
McCannell, Miss M. G. . . . Milton.  
MacCorkindale, J. C., Owen Sound.  
McCredie, Miss R. M., Aurora, Ill.  
Macdonald, Miss M. . . . Toronto.  
McEown, Miss R. . . . Toronto.  
MacFayden, Miss C. B. . . . Toronto.  
MacGillivray, Miss A. T., Toronto.  
MacGregor, J.,  
Alexandria, Scotland.  
McKague, W. A. . . . Toronto.  
McKay, A. L. . . . Toronto.  
McKenna, W. J. . . . Toronto.  
McKenzie, R. N. . . . Guelph.  
McLellan, C. D. . . . Toronto.  
MacLennan, Miss M. H., Toronto.  
McMillan, Miss H. A. . . . London.  
McNeely, Miss E. I.,  
Carleton Place.  
McPhee, N. . . . Ophir.  
McQuarrie, W. C. H. . . . Valetta.  
McRae, Miss A. A. . . . Beaverton.  
Masson, D. M. . . . Toronto.  
Mathers, F. G. . . . Winnipeg, Man.  
Mavor, Miss E. G. . . . Beamsville.  
Meech, R. G. . . . Toronto.  
Meek, J. F. . . . Port Stanley.  
\*Merchant, Miss M. C. . . . Toronto.  
Millar, Miss E. V. . . . Toronto.  
Milne, T. H. . . . Arthur.  
Mooney, W. E. . . . Toronto.  
Morton, F. L. . . . Keswick.  
Muir, S. L. . . . Toronto.  
Mullins, Miss H. M. . . . Toronto.  
Munro, Miss F. A. S. . . . London.  
Murphy, Miss G. M. . . . Cayuga.  
Murray, J. G. . . . Toronto.

Nelles, D. A. H. . . . Simcoe.  
Niblock, C. W., Medicine Hat, Alta.  
O'Brien, G. S. . . . Toronto.  
Olsen, F. . . . Toronto.  
Painting, T. D. . . . Warrington, Eng.  
Parkes, Miss A. E. M. . . . Toronto.  
Paterson, Miss C. M. . . . Toronto.  
Patten, E. W. . . . St. George.  
Pearson, H. E. . . . Weston.  
Pearlstein, J. D. . . . Hamilton.  
Peck, Miss H. R. . . . Streetsville.  
Peck, J. D. . . . Gananoque.  
Peck, Miss M. M. . . . Streetsville.  
Pendergast, Miss J. M. . . . Sarnia.  
Plaskett, H. H. . . . Ottawa.  
Poupore, A. G. . . . Vancouver, B.C.  
Powell, W. G. . . . Stratford.  
Pratt, Miss W. I. . . . Toronto.  
Prendergast, D. J. . . . Toronto.  
Prewett, F. J. . . . Toronto.  
Pritchard, R. B. . . . N. Wakefield, Q.  
Proudlove, H. B. . . . Oil Springs.  
Rainboth, E. C. . . . Ottawa.  
Rhodes, E. W. . . . Toronto.  
Riddell, Miss E. M. . . . Carlyle.  
Ritchie, F. G. . . . Winnipeg, Man.  
Robinson, J. R. . . . Toronto.  
Rosar, W. F. . . . Toronto.  
Ross, Miss M. . . . London.  
Ryrie, E. . . . Toronto.  
Sanders, E. F. . . . Ottawa.  
Shields, H. R. . . . Toronto.  
Shortill, Miss M. M. . . . Toronto.  
Silk, Miss A. I. . . . Shelburne.  
Slee, W. R. . . . Humber Bay.  
Smoke, A. L. . . . Toronto.  
Sorley, J. C. . . . Cumming's Bridge.  
Spellen, J. D. . . . Toronto.  
Stalker, Miss M. E. J., Walkerton.  
Stevenson, Miss C. M. . . . Listowel.  
Stevenson, H. G. . . . Toronto.  
Stirrett, Miss F. M. . . . Toronto.  
Stowe, Miss H. I. . . . Toronto.  
Stowe, Miss M. A. . . . Toronto.  
\*Struthers, Miss M. T. . . . Galt.  
Sutton, Miss M. L. . . . Bethany.  
Swazey, Miss M. A. . . . Dunnville.  
\*Tancock, A. W., Chelmsford, Eng.  
Tannahill, R. D. . . . Toronto.  
Tassie, Miss R. B. . . . Dresden.  
Taylor, H. M. . . . Sarnia.  
Taylor, N. J. . . . Regina, Sask.  
Thompson, Miss E. P. . . . Orillia.  
Thompson, Miss M. H. . . . Toronto.  
Wade, Miss D. E. . . . Sarnia.  
Walker, Miss M. E. . . . Toronto.  
Wallace, J. B. . . . Toronto.

Whitelaw, R. G.....	Toronto.	Wilson, R. H.....	Tilbury.
Wigham, Miss H. E.....	Toronto.	*Wylie, N.....	Toronto.
Williams, M. W.....	Burlington.	Young, J. F. T.....	Toronto.
Wilson, A. P.....	Tilbury.	Young, C. O.....	Toronto.

## Third Year.

Ainslie, D. S.....	Comber.	Flumerfelt, Miss N. M....	Toronto.
Ainslie, G. D.....	Comber.	Forsyth, E.....	Stouffville.
Amsden, Miss O. S.....	Toronto.	Fraser, Miss M. J. F.....	Toronto.
Anderson, Miss M.....	Peterborough.	Fraser, Miss M. M.....	Toronto.
Annable, G. R.....	Annable, B.C.	Fraser, Miss M. S.....	Hamilton.
Armstrong, B. D.....	Uxbridge.	Frawley, J. J.....	Sudbury.
Armstrong, H. B.....	Inglewood.	Frost, G. B.....	Orillia.
Ballantyne, G. A.....	Stratford.	Fulton, Miss L. A.....	Toronto.
Bastedo, A. C.....	Milton.	Galloway, G. G.....	Toronto.
Beattie, Miss M. G.....	Toronto.	Gauld, G. S. M.,	
Bleakney, A. S.....	Ottawa.	Taikoku, Formosa, Japan.	
Boulter, J. W.....	Toronto.	Gauld, J. G.....	Mimico.
Bourinot, A. S.....	Toronto.	Gibson, Miss M. F.....	Toronto.
Boyle, Miss M.....	Toronto.	Gibson, W. O.....	Oakville.
Bradley, H. D.....	Fenaghvale.	Gillespie, R. S.....	Galt.
Brady, Miss H. M.....	Toronto.	Grant, C. C.....	Granton.
Browne, L. M.....	Toronto.	Grayson, C. D.,	Moose Jaw, Sask.
Byfield, Miss G. C.....	Toronto.	Green, H. C.....	Kaslo, B.C.
Cameron, H. C.....	St. Thomas.	Gregory, W. F.....	Collingwood.
Carter, F. H.....	Toronto.	Grenville, Miss L. H.....	Thorold.
Clarke, W. M.....	Ottawa.	Griffiths, Miss G. M.....	Thorold.
Clarkson, M. A.....	Toronto.	Haig, D. E.....	Toronto.
Cody, E. L.....	Newmarket.	Hanna, Miss L.....	Toronto.
Cohen, B.....	Toronto.	Harcourt, C. C.....	Toronto.
Cohen, S.....	Toronto.	Harris, J.....	Toronto.
Coombs, F. H.....	Ridgetown.	Harris, W.....	Toronto.
†Courian, M.....	Toronto.	Harstone, J. A.....	Peterborough.
Cowan, A. J.....	Deloraine, Man.	Hart, N. C.....	Mt. Horeb.
Crawford, S. H.....	Toronto.	Henderson, Miss A. M....	Toronto.
Cryderman, Miss M....	Walkerton.	Henning, Miss H. J.....	Toronto.
Cuzner, A. E.....	Ottawa.	Hill, J. E.....	Aurora.
Dickson, J. S.....	Toronto.	Hobbins, J. V.....	Toronto.
Dignum, Miss D. V.....	Toronto.	Holmes, A.....	Toronto.
Doherty, J. D.....	Owen Sound.	Hosken, E. D.....	Toronto.
Dorrance, R. L.....	Seaforth.	Hough, Miss E. E.....	Toronto.
Dowler, V. B.....	Fort William.	Howell, Miss H. M.....	Hamilton.
Dryden, Miss E. M....	Wellesley.	Huenergard, A. J. C....	Waterloo.
Dunstan, G. P.....	Toronto.	Hughes, R. L.....	Toronto.
Eadie, G. S.....	Toronto.	Hume, G. S.....	Milton.
Elliott, C. E.....	St. Thomas.	Hurndall, Miss K. E.....	Toronto.
Ellis, E. W.....	Toronto.	Jones, J. W.....	St. John, N.B.
Evans, Miss N. W.....	Toronto.	Kammerer, Miss S. M. F.	Toronto.
Fasken, S. A.....	Belgrave.	Kay, H. R.....	Glasgow, Scotland.
Ferguson, Miss B.....	Meaford.	Kelly, Miss M.....	Stratford.
Ferguson, I. O.....	Toronto.	Kemp, H. R.....	Woodstock.
Ferguson, Miss M. B.,		Kennedy, H. B.....	Toronto.
St. Catharines.		Kingsford, M. R.....	Toronto.
Ferrier, Miss D. J.....	Toronto.	Kingsmill, J. A.....	Chatham.
Ferrier, Miss J. I.....	Toronto.	Laird, Miss M. E.....	Innerkip.
Firth, L. M.....	London.	Lamey, M. P.....	Hastings.



Lang, Miss J. M.....	Toronto.	Pratt, Miss L. B.....	Ottawa.
Latchford, A. M.....	Parent, Q.	Pringle, Miss G. S.....	Brampton.
Leckie, J. G.....	Brussels.	Rankin, D. O.....	Toronto.
Lefroy, L. D.....	Toronto.	Riddell, Miss R. B....	Carlyle, Sask.
Lemon, R. C.....	Toronto.	Robertson, A. S.....	Toronto.
Leonard, T. D.....	Toronto.	Robinson, Miss J.....	Toronto.
Lewis, A. D.....	Toronto.	Rodden, Miss M.....	Haileybury.
Loudon, L. B. M.....	Toronto.	Ross, W. W. E.....	Pembroke.
Lowrie, J. C.....	Weidmann.	Runians, Miss M. C.....	London.
Macallum, A. D.....	Toronto.	Russell, A. H. K.....	Toronto.
Macaulay, Miss V. I....	Vancouver.	Rutherford, H. R.,	Moose Jaw, Sask.
McBride, W. J....	Lockport, N.Y.	Scott, Miss H. W.....	Rockwood.
McCallum, F. H....	Smith's Falls.	Seymour, M. A....	Vancouver, B.C.
McCormack, Miss G. M...	Toronto.	Sifton, C., Jr.....	Ottawa.
McDougall, A. G.....	Ottawa.	Simpson, E. A., Jr.....	Toronto.
MacDougall, D. P....	Marvelville.	Simpson, J. G.....	Keppel, Sask.
McFaul, J. F....	Bushmills, Ireland.	Sinclair, H. A.....	Toronto.
McKnight, Miss M. G....	Kirkwall.	Smith, Miss C. C....	St. Catharines.
McLaren, D.....	Calgary, Alta.	Smith, E. G.....	Toronto.
McLean, G. A.....	Orillia.	Smyth, R. J.....	Berlin.
McLennan, Miss A. A.,		Stewart, A. G.....	Lindsay.
	River John, N.S.	Strachan, W. B.....	Brussels.
McMahon, J. A.....	Exeter.	Stuart, Miss A. M.....	Mitchell.
*McMahon, Miss M.....	Toronto.	Swan, W. D.....	Brucefield.
MacMillan, E. C.....	Mimico.	‡Switzer, Miss J.....	Bristol, Q.
MacMillan, K. A.....	Toronto.	Taylor, Miss M. E....	New Liskeard.
McNabb, I. P.....	Orillia.	‡Thompson, A. R.....	Ottawa.
McPhedran, Miss L.....	Toronto.	Thomson, A.....	Dobbingtown.
Macpherson, Miss M....	Toronto.	Tighe, Miss E. S.....	Toronto.
MacRae, Miss J. R.....	Toronto.	Turnbull, A.....	Canfield.
Mahaffy, K. A.....	Bracebridge.	Turney, H.....	Trenton.
Marshall, F. R.....	Toronto.	Ungaro, F. D.....	Toronto.
Martin, C. C.....	Toronto.	Wade, Miss K. C.....	Renfrew.
Martin, Miss J. E....	Hagersville.	Walker, H. C.....	Toronto.
May, G. G.....	Ottawa.	Walsh, E. D.....	Stratford.
Middleton, Miss E. P....	Toronto.	Walter, W. H.....	Saltford.
Milne, W. C.....	Toronto.	Watts, W. J.....	Toronto.
Monteith, W. A.....	Exeter.	Weissgerber, L. A....	Calgary, Alta.
*Morgan, Miss I. V....	Hamilton.	Wells, G. E.....	Saskatoon, Sask.
Morris, J. R.....	Pembroke.	West, W. R.....	Campbellford.
Murray, H. G.....	Gore Bay.	Westcott, W. A.....	Beaverton.
Morrison, Miss O. E....	Elmvale.	Whalley, Miss A. R.....	Dundas.
O'Neil, Miss J.....	Clinton.	Wilkinson, J.....	Aberarder.
Park, Miss C. H....	Peterborough.	Willard, W. H.....	Toronto.
Parks, J. D.....	Orillia.	Wrong, H. H.....	Toronto.
Patton, W. J.....	Airlie.		

## Fourth Year.

Adamson, Miss F. M....	Toronto.	Beck, C. L.....	Edmonton, Alta.
Anderson, F. H.....	Meaford.	Blake, G. E.....	Toronto.
Appelbe, Miss L. A.....	Orillia.	Boyce, A. J.....	Goderich.
Archibald, C. H.....	Toronto.	Boyle, Miss E. M.....	London.
Barber, W. A.....	Owen Sound.	Breslove, D.....	Toronto.
Barbour, Miss M. L....	Meaford.	Brown, Miss I. G.....	Oakville.
Beattie, R. G.....	Toronto.	Brown, Miss M. S.....	Hamilton.
Beatty, J. G.....	Brampton.	Cameron, Miss F. M...	St. Thomas.



- Campbell, G. S. . . . . Ridgetown.  
 Campbell, L. B. . . . . Toronto.  
 Campbell, Miss L. M. . . . . Toronto.  
 Carlyle, Miss M. M. . . . . Toronto.  
 Carruthers, Miss J. . . . . Little Current.  
 Carter, Miss V. M. . . . . Clifford.  
 Chamberlain, T. S. . . . . Toronto.  
 Chidley, G. M. . . . . Caledonia.  
 Clarke, H. B. . . . . Toronto.  
 \*Clugston, H. S. . . . . Meaford.  
 Cochrane, O. D. . . . . Ottawa.  
 Code, Miss D. L. . . . . Perth.  
 Cole, O. . . . . Toronto.  
 Coleman, D. B. . . . . Wellandport.  
 Collins, Miss K. I. . . . . Toronto.  
 Cook, S. J. . . . . Collingwood.  
 Cory, T. L. . . . . Ottawa.  
 Cowan, Miss H. I. . . . . Deloraine, Man.  
 Cromarty, R. P. . . . . Toronto.  
 Dearle, R. C. . . . . Toronto.  
 DeFoe, Miss E. M. . . . . Toronto.  
 Douglas, A. R. . . . . St. Thomas.  
 Drury, K. C. . . . . Victoria, B. C.  
 Duncan, A. J. . . . . Toronto.  
 Duncan, Miss M. . . . . Port Credit.  
 Edgar, Miss A. . . . . Sundridge.  
 Edward, W. G. . . . . Toronto.  
 Elliot, H. A. . . . . Midland.  
 Elliott, M. S. . . . . Toronto.  
 Fennell, Miss M. A. . . . . Toronto.  
 Ferguson, J. . . . . Rouleau, Sask.  
 Ferguson, J. P. . . . . Spruce Green.  
 Ferris, R. B. . . . . Toronto.  
 Field, Miss J. . . . . Toronto.  
 Fielding, E. L. . . . . Toronto.  
 Finklestein, H. . . . . Toronto.  
 Foerster, A. J. . . . . Tavistock.  
 Forsyth, O. . . . . Orangeville.  
 Foster, F. J. . . . . Goderich.  
 Found, C. G. . . . . Toronto.  
 Franklin, Miss H. A., Port Rowan.  
 Frawley, J. M. . . . . Sudbury.  
 Gallagher, W. J. . . . . Toronto.  
 Garland, Miss M. A. . . . . Winnipeg.  
 Garbutt, Miss M. M. . . . . Brampton.  
 Gilchrist, J. A. . . . . Toronto.  
 Glennie, G. H. . . . . Elmira.  
 Glover, E. . . . . Liverpool, Eng.  
 Goforth, P.,  
     Chang-te-ho, Honan, China.  
 Goodearle, W. E. . . . . Toronto.  
 Goodman, D. . . . . Toronto.  
 Goold, J. N. . . . . Toronto.  
 Gordon, D. W. . . . . Toronto.  
 Gowans, C. A. . . . . Science Hill.  
 ‡Grant, J. W. . . . . Toronto.  
 Grant, O. W. . . . . Toronto.  
 Gregg, Miss M. W. . . . . Toronto.  
 Grove, J. H. . . . . Toronto.  
 Hall, Miss G. . . . . Vankleek Hill.  
 Hamil, C. B. . . . . Charing Cross.  
 Hamilton, Miss S. . . . . Hamilton.  
 Hammond, H. B. S.,  
     Orlando, Florida.  
 Harris, N. E. . . . . Jasper.  
 Harrison, L. C. . . . . Port Stanley.  
 ‡Harvie, J. G. . . . . Coldwater.  
 Hayes, C. T. . . . . Beaton.  
 Henderson, E. C. . . . . Ingersoll.  
 Henderson, J. P. . . . . Toronto.  
 Hendry, Miss G. E. . . . . Toronto.  
 Hill, J. W. . . . . Lumsden, Sask.  
 Hodgins, J. I. . . . . Toronto.  
 Howson, J. H. . . . . Toronto.  
 Hughes, Miss K. E. M.,  
     Mimico Beach.  
 Hyde, Miss C. I. . . . . Dundas.  
 Hyatt, Miss M. R.,  
      Fargo, N. Dakota.  
 Ireland, Miss D. K. . . . . St. Catharines.  
 Johnston, G. A. . . . . Brooklin.  
 Johnson, Miss M. P. . . . . Collingwood.  
 Kelly, Miss K. T. . . . . Sarnia.  
 Kelly, T. E. . . . . Toronto.  
 Kennedy, Miss A. . . . . Stratford.  
 Kennedy, E. S. . . . . Toronto.  
 Kennelly, Miss H. L. . . . . Toronto.  
 Kester, W. C. . . . . St. Mary's.  
 Kinnear, A. R. . . . . Toronto.  
 Knox, J. K. . . . . Craigsholme.  
 Laird, W. C. . . . . Regina, Sask.  
 Lamont, Miss J. K. . . . . Toronto.  
 Lane, A. . . . . Kinlough.  
 Latchford, J. K. . . . . Toronto.  
 Law, R. M. . . . . Toronto.  
 Lawrence, C. F. . . . . Redickville.  
 Lindsay, C. B. . . . . Toronto.  
 Lower, A. R. M. . . . . Barrie.  
 Lovell, Miss M. G. . . . . Toronto.  
 McClelland, R. G. . . . . Arthur.  
 McColl, E. L. . . . . Toronto.  
 McConaghy, C. A. . . . . Richmond Hill.  
 McClelland, J. C. . . . . Toronto.  
 McClenahan, W. S. . . . . Milton.  
 Macdonald, Miss J. M. . . . . Toronto.  
 Macdonald, W. R. . . . . Brantford.  
 ‡McDougall, J. L. . . . . Ottawa.  
 McGillivray, R. . . . . Hamilton.  
 McKee, C. S. . . . . Toronto.  
 McKellar, J. . . . . Tavistock.  
 MacLachlan, Miss A. F. . . . . Toronto.  
 McLachlin, J. L. . . . . Toronto.  
 McLeod, A. . . . . Goderich.  
 McNab, Miss A. . . . . Belleville.

Martin, Miss E. D. G. . . . .	Toronto.	Scott, C. V. . . . .	Toronto.
Matthew, E. G. . . . .	Nelson, B.C.	Sharpe, O. E. . . . .	Toronto.
Maxwell, Miss G. . . . .	Revelstoke, B.C.	Sifton, H. A. . . . .	Toronto.
Meek, Miss R. K. . . . .	Shanty Bay.	Smith, C. E. . . . .	Regina, Sask.
Millman, Miss M. B. . . . .	Toronto.	Smith, G. N. . . . .	Lunenburg, N.S.
Mitchell, Miss E. I. . . . .	Toronto.	Smith, Miss M. G. . . . .	Esquering.
Mitchell, H. A., Prince Albert, Sask.		Smith, Miss S. L. . . . .	Orono.
Mitchell, Miss M. E. . . . .	Toronto.	Snyder, Miss E. C. . . . .	Montreal, Q.
Mooney, V. T. . . . .	London.	Soules, D. C. . . . .	Toronto.
Morgan, Miss N. H.,		Spaulding, H. B. . . . .	Aurora.
Niagara-on-the-Lake.		Steedman, Miss J. M. . . . .	Hamilton.
Morgan, W.,		Steinmetz, Miss I. D. . . . .	Fruitland.
West Hertlepool, Eng.		Stevenson, O. D. A. . . . .	London.
Morrison, G. O. . . . .	Elmvale.	Stewart, Miss A. M. . . . .	Toronto.
Moyer, P. G. . . . .	Ottawa.	Stewart, D. H. . . . .	Toronto.
Muat, Miss F. L. . . . .	Toronto.	Stinson, Miss M. E. . . . .	Toronto.
Murphy, A. H. . . . .	Toronto.	Swanston, A. E. . . . .	Owen Sound.
Noonan, Miss A. . . . .	Mount Forest.	Symons, Miss H. F. . . . .	Toronto.
O'Connor, Miss F. B. S. . . . .	Toronto.	Taylor, H. M. . . . .	Moose Jaw, Sask.
Oliver, E. T. . . . .	Toronto.	Taylor, Miss M. I. . . . .	Toronto.
Park, H. . . . .	Hamilton.	Teskey, F. C. . . . .	Toronto.
Parker, H. A. . . . .	Blairton.	Thomson, E. A. . . . .	Hastings.
Parker, Mrs. F. G. . . . .	Seaforth.	Tobin, Miss B. . . . .	Stratford.
Paton, D. G. . . . .	Toronto.	Tom, Miss J. B. . . . .	Goderich.
Patterson, G. C. . . . .	Los Angeles, Cal.	Tucker, Miss M. C. . . . .	St. Thomas.
Peebles, A. . . . .	Colborne.	Turnbull, Miss E. B. . . . .	Hamilton.
Penfold, Miss J. L. . . . .	Guelph.	Wallace, Miss M. H. . . . .	Iroquois.
Pepler, D. F. . . . .	Toronto.	Ward, Miss E. G. . . . .	Cobourg.
Phillips, F. . . . .	Toronto.	Warner, C. G. . . . .	Toronto.
Poupore, W. E. . . . .	Vancouver, B.C.	Westman, L. E. . . . .	Granton.
Preston, H. B. . . . .	Brantford.	Wigham, Miss R. A. . . . .	Toronto.
Preston, W. J. . . . .	Stratford.	Willis, J. S. . . . .	Toronto.
Pulleyblank, W. G. E. . . . .	Granton.	Willoughby, C. M. R.,	
Quinlan, Miss F. M. . . . .	Port Hope.	Regina, Sask.	
Ratcliffe, G. B. . . . .	Regina, Sask.	Woods, J. R. . . . .	Toronto.
Robertson, E. J. . . . .	Lanark.	Wright, Miss M. J. . . . .	Toronto.
Robertson, N. S. . . . .	Orangeville.	Wrightman, Miss H. C.	Burgessville.
Ross, Miss A. E. . . . .	Toronto.	Ziegler, Miss O. I. . . . .	Toronto.
Ross, W. A. . . . .	Embro.	Zink, Miss V. C. . . . .	Toronto.
Ruse, Miss S. H. . . . .	Toronto.		

### Occasional Students.

Alderwood, H. . . . .	Toronto.	Clark, C. F. . . . .	Toronto.
Andrews, F. . . . .	Portsmouth, Eng.	†Clewes, H. R. . . . .	Ottawa.
Ashe-Everest, W. . . . .	Warminster, Eng.	Colclough, B. P., Springfield, P.E.I.	
Baines, W. H. . . . .	Orillia.	Congdon, Miss F. M. . . . .	Toronto.
Barclay, A. N. . . . .	Hamilton.	Cotton, T. H. . . . .	Toronto.
Barry, Miss M. L. . . . .	Toronto.	Cross, Miss D. . . . .	Toronto.
Belcher, Miss I. . . . .	Toronto.	Davison, F. H. . . . .	Bridgewater, N.S.
Bradley, C. R. . . . .	St. Catharines.	deGuerre, Miss L. B. . . . .	Toronto.
Bright, D. . . . .	E. Bridgford, Eng.	Dudley, H. G. . . . .	Peterborough.
Bunting, J. B., Whatslandwell, Eng.		†Dunn, Miss A. T. . . . .	Walkerville.
Burrows, F. . . . .	Chapleau.	Elliott, J. B. . . . .	Dublin, Ireland.
Callan, J. J. . . . .	Dublin, Ireland.	Ellis, F. . . . .	London, Eng.
Carson, Miss C. E. . . . .	Toronto.	Evans, G. . . . .	St. Catharines.
Casselman, Miss M. M. North Bay.		Ferguson, J. S. . . . .	Thornhill.
Cath el s, L. P. . . . .	Hawick, Scotland.	Field, Miss H. . . . .	Toronto.

Fisher, G. W. ....	Montreal, Q.	Martin, H. D. ....	London, Eng.
Froom, M. A. ....	Regina, Sask.	Mearns, Miss J. M. ....	Toronto.
Gardiner, S. ....	Inwood.	Naylor, H. ....	Toronto.
Gauntlett, R. C.	Upper Norwood, Eng.	Paterson, J. D. ....	Toronto.
Gibney, F. M. R.,	Gilford, Ireland.	Quarterman, C. H. ....	Toronto.
Gillett, J. ....	Twillingate, Nfld.	Rabinowitch, Miss S. ....	Toronto.
Gillman, E. ....	Toronto.	Reade, Miss J. B. ....	Toronto.
Glazebrook, Miss M. F. ....	Toronto.	Robbins, J. J. ....	Toronto.
Godfrey, Mrs. F. W. ....	Toronto.	Robertson, Miss S. C.,	Calgary, Alta.
Graham, R. P. ....	Toronto.	Robinson, E. E. ....	Margate, Eng.
Grahame, Miss J. B. ....	Toronto.	Robinson, E. G. ....	Brantford.
Green, E. A. ....	Woking, Eng.	Rostron, R. A. ....	Liverpool, Eng.
Greening, Miss C. G. ....	Toronto.	Russell, S. M. ....	Owen Sound.
Harrington, J. S. ....	Halifax, N.S.	Scobie, Miss M. A. ....	Toronto.
Heaton, Miss H. G. ....	Toronto.	Secrett, L. C. ....	Dutton.
Hime, Miss M. C. ....	Toronto.	Shaw, Miss M. P. ....	Toronto.
Hodge, H. B. ....	Winnipeg, Man.	Silverlight, A. C.,	Wandsluk, Germany.
Howard, R. M. ....	Toronto.	Sinclair, I. M. R. ....	Toronto.
†Huestis, Miss D. L. ....	Toronto.	Small, Miss M. ....	Toronto.
Hyder, A. W. ....	Penshurst, Eng.	Smith, H. N. ....	Mt. Dennis.
Ireland, Miss S. B. M. ....	Toronto.	Stark, Miss D. L. ....	Toronto.
Jones, C. G. ....	Brethour.	†Stollery, Miss E. ....	Toronto.
Jones, F. M. ....	Los Angeles, Cal.	Storey, J. W. ....	Toronto.
Kerr, J. H. ....	Henfryn.	Taylor, W. J. ....	Hove, Eng.
Kerr, Miss M. G. ....	Owen Sound.	Turner, G. C. ....	Toronto.
Kittelman, Miss C. A. ....	Toronto.	Waddington, Miss M. M. ....	Toronto.
Kurata, Mrs. B. A. ....	Toronto.	Walker, W. H. V. ....	Port Hope.
Kurata, T. B. ....	Toronto.	West, H. A. ....	St. Catharines.
Lamont, Miss H. R. ....	Toronto.	Widdows, R. F. ....	London, Eng.
Langford, D. B. ....	Toronto.	Williams, G. H.,	Dulwich, London, Eng.
Leonard, Miss I. M. ....	Sydney.	Williams, J. L. ....	Liverpool, Eng.
McCollum, A. C. ....	Orillia.	Wood, E. P. ....	Toronto.
MacDonald, C. H. ....	Teeswater.	Wookey, Miss G. E. ....	Toronto.
McFarrin, Miss K. ....	Toronto.		
McKim, R. T. ....	St. John, N.B.		
Marchant, A. ....	Dunstable, Eng.		

### Summary.

First Year Students. ....	308
Second Year Students. ....	230
Third Year Students. ....	188
Fourth Year Students. ....	202
Occasional Students. ....	99
Total. ....	1027

## VICTORIA COLLEGE.

## First Year.

Addy, J. J.....	Toronto.	Elgie, G. C.....	Albert College.
Almack, W. W. C.....	Trafalgar.	Elliott, Miss M. M.....	Pakenham.
Arkley, Miss H. P.....	Ottawa.	Etherington, A. E.,	
Armstrong, Miss G. E..	Hanover.		Columbian College.
Arner, Miss B. B.....	Harrow.	Ferguson, Miss E. A..	Tottenham.
Arnold, D. A.....	Cookstown.	Fisher, C. B.....	Lindsay.
Arnot, C. M.....	Toronto.	Forman, J. H.....	Albert College.
Ashbourne, T. G. W.,		Francis, S. A. M.,	
	Twillingate, Nfld.		Broad Cove, Nfld.
Atkinson, G. E.,		Fraser, Miss D.....	Annan.
	Columbian College.	Garden, J. H.....	Calgary, Alta.
*Atkinson, H.....	Caledonia.	Glover, J. B....	Medicine Hat, Alta.
Avison, D.....	Smith's Falls.	Gold, M.....	Toronto.
Baker, Miss L. V.....	Whitby.	Goodman, W. H.....	Toronto.
Bartley, Miss G. M.....	Toronto.	Greenaway, Miss E. M....	Toronto.
Bassett, J. A.....	Listowel.	Greene, Miss A. B.....	Athens.
Bates, D. W.....	Dundas.	Griffith, J. B.....	Hamilton.
Bates, H. C.....	Dundas.	Guenther, J. F.....	Hamilton.
Beasley, B. C.....	Burlington.	Hamill, Miss A. M.....	Meaford.
Beatty, L. S.....	Toronto.	Hamilton, G. H.,	
Bell, E. C.....	Stayner.		Columbian College.
Bennett, R. S.,	Columbian College.	Hampson, A.....	Guelph.
Best, E. L. ....	Columbian College.	Hanna, W. N.....	Sarnia.
Bicknell, J. N.....	Toronto.	Hardy, R. W.....	Oakwood.
Birrell, R. G.....	Pinkerton.	Hardy, W. G.....	Woodville.
Blaisdell, L. B.....	Toronto.	Harris, Miss V. I..	Campbellford.
Bowes, H. E.....	Ingersoll.	Harwood, Miss C. M.....	Toronto.
Brearley, E. W.....	Woodstock.	Hazlewood, T. W.....	Kirkton.
Brown, A. H.....	Regina, Sask.	Henderson, N. W.....	Toronto.
Brown, H. D.....	Brampton.	Hewson, C. H.....	Mayfield.
Butt, G. W.....	Toronto.	Heywood, P. K.....	Toronto.
Butt, S. ....	Cat Harbor, Nfld.	Hilliard, F.....	Morrisburg.
Calder, R. C.....	Grimsbys.	Hoover, J. E.....	Toronto.
Campbell, W. K.....	Mitchell.	Horning, F. J.....	Toronto.
Carscadden, Miss H. L.,		Howard, G. E. C.....	Toronto.
	Burketon Junction.	Hudson, L. G.,	
Chandler, C. M.....	Newcastle.		Lower Island Cove, Nfld.
Chapin, R. T.....	Oshawa.	Hughes, J. A....	Boissevain, Man.
Cheney, H. W.....	Ottawa.	Huston, W. J. H.....	Forest.
Clark, Miss A. B.....	Barrie.	Huycke, G. M.....	Peterborough.
Clark, N. D.....	Toronto.	Irwin, Miss F. H.....	Stratford.
Cobb, H. S.....	Albert College.	Irwin, T. N.....	Stratford.
Collins, J. E.....	Toronto.	Jenner, Miss A. D.....	Kingsville.
Congdon, E. P.....	Hamilton.	Jewitt, E. W.....	Blyth.
Connor, Miss B. E..	Aylmer West.	*Johnston, A. P.....	Toronto.
Cooley, F. B.....	Hanover.	Joliffe, R. H. M.....	Bowmanville.
Corrigan, Miss B. J.....	Toronto.	Jones, C. A.,	Columbian College.
Cumming, R. B....	Wallacetown.	Kemp, M. W.....	Heathcote.
Devenish, Miss G..	Calgary, Alta.	Kempthorne, Miss M. M..	Whitby.
Dobson, G. C.....	Utopia.	Kilborn, L. G.,	
Edmonds, E. W.....	St. Catharines.		Chengtu, Szechwan, China.



Kimura, S. . . . .	Hayashida, Japan.	Price, M. O. . . . .	Toronto.
Klemmer, Miss C. E. . . . .	Clifford.	Raley, G. G. E.,	
Knechtel, Miss R. . . . .	Hanover.		Columbian College.
Knox, H. A. . . . .	Indian River.	Reed, F. J. . . . .	Grass Hill.
Lacey, A. . . . .	Botwood, Nfld.	Reynolds, N. W. . . . .	Solina.
Lane, A. . . . .	St. Ann's.	Richardson, G. A. . . . .	Stirling.
Langford, J. A. . . . .	Calgary, Alta.	Richings, W. P. . . . .	St. Catharines.
Lattin, Miss E. S. . . . .	Hamilton.	Ridge, W. W. . . . .	Woodburn.
Learoyd, C. W. . . . .	Aurora.	Robertson, R. . . . .	Blenheim.
Lent, R. W. . . . .	Toronto.	Robinson, W. O. . . . .	Zurich.
Longworthy, Miss E. M.,		Sanders, H. F. . . . .	Toronto.
	Regina, Sask.	Self, A. R. . . . .	Toronto.
Luck, N. E. . . . .	Brantford.	Sharpe, E. W. C. . . . .	Toronto.
MacKenzie, M.,		Shaw, Miss A. E. . . . .	Wallaceburg.
	Columbian College.	Shaw, Miss R. M. . . . .	Kamloops, B.C.
Magee, Miss E. L. . . . .	Kelowna, B.C.	Shepard, Miss G. H. . . . .	Port Stanley.
Malcolm, Miss M. F. . . . .	Shanty Bay.	Smith, J. W. . . . .	Columbian College.
Manning, Miss L. M. . . . .	Toronto.	Smith, Miss L. R. . . . .	Veteran, Alta.
Marritt, I. C. . . . .	Keswick.	Smith, Miss M. S. . . . .	Harrow.
Martin, Miss C. J. . . . .	Mulmur.	Snider, E. E. . . . .	Columbian College.
Marwood, W. A.,		Spence, A. G. A. . . . .	Toronto.
	Columbian College.	Stewart, A. E. . . . .	Mount Hamilton.
Mason, Miss E. W. H. . . . .	Stratford.	Stewart, R. E. . . . .	Baltimore.
Maus, Miss A. . . . .	Paris.	Stafford, B. L. . . . .	Columbian College.
May, E. R. . . . .	Albert College.	Strangways, Miss R. E. A.,	
Miller, Miss J. A. . . . .	Rock Springs.		Albert College.
Mitchell, Miss L. K. . . . .	Toronto.	Swann, H. F. . . . .	Kitamaat, B.C.
Montgomery, M. . . . .	Blackstock.	Switzer, A. W. . . . .	Anderson.
Moon, H. R. . . . .	Sydenham.	Tane, W. F. . . . .	Oshawa.
Morris, N. D. . . . .	Orillia.	Thompson, R. G. . . . .	Stirling.
Murray, J. K. P. . . . .	Toronto.	Timmins, H. A. W. . . . .	Toronto.
Neff, Miss R. B. . . . .	Toronto.	Tribble, J. W. . . . .	Honeywood.
Newell, F. W. . . . .	Toronto.	Watson, H. J. . . . .	Toronto.
Nimmo, C. R. . . . .	Nipigon.	Wear, J. S. . . . .	Windsor.
Oldham, G. E. . . . .	Bond Head.	Wells, Miss H. C. . . . .	Chatham.
Osborne, W. H. . . . .	Albert College.	Wettlaufer, J. N. . . . .	Tavistock.
Palmer, B. M. . . . .	Toronto.	White, H. . . . .	Albert College.
Parks, Miss V. E. . . . .	Oshawa.	White, L. C. . . . .	Chatham.
*Parsons, W. C. . . . .	Darlington.	Whitmore, N. W. . . . .	St. Thomas.
Patrick, Miss E. . . . .	Yorkton, Sask.	Whitney, R. L. . . . .	Atherley.
Pearson, L. B. . . . .	Hamilton.	Whittaker, W. W. . . . .	Guelph.
*Peck, F. G. . . . .	Salford.	Wiggins, F. A. . . . .	North Rideau.
Pentland, A. E. C. . . . .	Watford.	Williams, Miss M. H. . . . .	Jarvis.
Peterson, A. H. . . . .	Cobourg.	Wilson, H. W. . . . .	Hamilton.
Powell, H. W. . . . .	Bridgeview.	Winters, Miss B. G. . . . .	Ottawa.

### Second Year.

Adams, C. B. . . . .	Hanover.	Bishop, Miss E. L. . . . .	Kimberley.
Adams, J. R. . . . .	Port Arthur.	Blatz, W. E. . . . .	Hamilton.
Appleby, Miss K. D. . . . .	Paris.	Bowles, W. G. . . . .	Toronto.
†Atkinson, H. . . . .	Caledonia.	Brown, Miss G. . . . .	Jefferson.
Ash, Miss E. A. . . . .	Toronto.	Butts, V. R. . . . .	Milton West.
Bell, A. H. . . . .	Paris.	Carruthers, Miss H. . . . .	Whitby.
Bell, F. J. . . . .	Arnprior.	Cawsey, Miss C. E. . . . .	Stratford.
Bennett, R. C. . . . .	Dunnville.	Chisholm, Miss S. E.,	
			Prince Albert, Sask.



- Church, E. F. . . . . Toronto.  
 Chute, E. F. . . . . St. Thomas.  
 Clerke, Miss M. E. . . . . Thedford.  
 Colbeck, Miss L. C. . . . . Toronto.  
 Conn, L. A. . . . . Thornbury.  
 Crandell, E. H. . . . . Calgary, Alta.  
 Crocker, K. J. . . . . Toronto.  
 Crowe, Miss M. . . . . Guelph.  
 Cullis, W. L. . . . . Markdale.  
 Daniels, P. . . . . Toronto.  
 Day, W. G. . . . . Old Perlican, Nfld.  
 Dippell, L. W. . . . . Walkerton.  
 Docherty, J. F. . . . . Seaforth.  
 Doolittle, G. W. . . . . Toronto.  
 Dyer, W. S. . . . . Toronto.  
 Fair, W. H. . . . . Brantford.  
 Fenwick, Miss A. . . . . St. John's, Nfld.  
 Finch, Miss E. B. . . . . St. Mary's.  
 Fitzpatrick, R. C.,  
     New Westminster, B.C.  
 French, Miss N. E. . . . . Toronto.  
 Gairdner, Miss A. . . . . Toronto.  
 Going, Miss E. R. . . . . Port Hope.  
 Greenslade, S. H. . . . . Laurel.  
 Greer, S. R. . . . . Moose Jaw, Sask.  
 Guest, Miss L. M. . . . . Kemptville.  
 Hamilton, D. K. . . . . Brantford.  
 Harris, C. W. . . . . Toronto.  
 Hastie, Miss A. E. . . . . Sheguiandah.  
 Henderson, Miss E. I. . . . . Toronto.  
 Henderson, F. C. . . . . Calgary, Alta.  
 Henry, Miss E. A. . . . . Barrie.  
 Henry, L. J. . . . . Kendal.  
 Henry, W. E. . . . . Markdale.  
 Herington, H. P. . . . . Toronto.  
 Heywood, A. J. . . . . Exeter.  
 Hockey, Miss C. E. . . . . Waterloo.  
 Hukins, R. G. . . . . Yorkton, Sask.  
 Hunnisett, W. A. . . . . Toronto.  
 Jackson, J. H. . . . . Kendal.  
 James, W. C. . . . . Toronto.  
 Jay, C. A. . . . . Milton West.  
 Kerby, Miss H. J. . . . . Calgary, Alta.  
 Kerruish, T. M. . . . . Fergus.  
 †Lanning, Miss M. M.,  
     Columbian College.  
 Lumsden, J. G. . . . . Hamilton.  
 McCullough, Miss E. . . . . Toronto.  
 McDonald, Miss B. C.,  
     Prince Albert, Sask.  
 McDonald, W. M. . . . . Chesley.  
 McIntosh, Miss M. . . . . Vankleek Hill.  
 McLaughlin, Miss E. M. . . . . Toronto.  
 McLaughlin, Miss R. M. . . . . Toronto.  
 McLaughlin, W. W. . . . . Toronto.  
 McLean, E. C. . . . . Spencerville.  
 McMullen, G. A. . . . . Toronto.  
 McMullen, T. C. . . . . Toronto.  
 Magee, E. . . . . Glen Bran.  
 Magwood, J. C. P. . . . . Toronto.  
 Manning, F. . . . . Wallace.  
 Martin, Miss H. L. . . . . Waterloo.  
 Martin, S. . . . . Edenvale.  
 Meredith, E. R. C.,  
     New Westminster, B.C.  
 Mitchell, J. E. . . . . Mount Elgin.  
 Moffat, Miss H. J. G.,  
     Peterborough.  
 Moffatt, R. C. . . . . Malakoff.  
 Moss, E. H. . . . . Thorndale.  
 Mossop, Miss B. K. E. . . . . London.  
 Moyer, Miss L. R. . . . . St. Catharines.  
 Musgrove, W. M. . . . . Niagara Falls.  
 Nethercott, J. P. S. . . . . Bothwell.  
 Noseworthy, J. W.,  
     Lewisporte, Nfld.  
 Ochs, Miss A. M. . . . . Preston.  
 Pengelly, A. E. . . . . Hanley, Sask.  
 Poldon, G. H. . . . . Norwich.  
 Pook, G. P. . . . . Toronto.  
 Porter, D. H. . . . . Toronto.  
 Puffer, D. S. . . . . Toronto.  
 Quance, Miss C. L. . . . . Hagersville.  
 Rehder, L. H. . . . . Paris.  
 Roberts, B. J. . . . . Toronto.  
 Rowland, Miss M. W.,  
     Milwaukee, Wis.  
 Schultz, M. L. . . . . Toronto.  
 Scott, F. G. . . . . Toronto.  
 Seaman, R. L. . . . . Port Arthur.  
 Seymour, E. O. . . . . Toronto.  
 Simpson, C. . . . . Toronto.  
 Smart, Miss M. J. . . . . Kingsville.  
 Snider, Miss P. L. . . . . Norman.  
 Spencer, Miss N. W.,  
     Kerrisdale, Vancouver, B.C.  
 Stapleford, Miss L. M. . . . . Toronto.  
 Stratton, K. V. . . . . Aylmer.  
 Taylor, F. L. . . . . Peterborough.  
 Taylor, R. M. . . . . Peterborough.  
 Teskey, L. C. . . . . Toronto.  
 Tuck, Miss E. M. . . . . Stoney Creek.  
 Walkom, E. J. . . . . Mitchell.  
 Weber, G. R. . . . . Hamilton.  
 Wheatley, A. C. . . . . Sarnia.  
 White, C. L. . . . . Brockville.  
 †Wilcox, W. A. . . . . Salmon Arm, B.C.  
 Willmott, A. R. . . . . Toronto.  
 Wilson, D. B. . . . . Toronto.  
 Wright, N. R. . . . . London.  
 Zimmerman, W. . . . . Hamilton.

## Third Year.

Albright, C. R.....	Beamsville.	McLauchlin, A.....	Toronto.
Almas, Miss A. F.....	Hagersville.	McMullen, Miss M.....	Toronto.
Ansley, J. W.....	Wingham.	Marvin, Miss B. V....	Claremont.
Banes, P. S.....	Crediton.	Meredith, Miss G. H.,	
Belfry, J. E.....	Orillia.	New Westminster, B.C.	
Bennett, H.....	Calgary, Alta.	Merifield, R. C.,	
Brown, G. W.....	Saskatoon, Sask.	Prince Albert, Sask.	
Buchanan, N. V....	Calgary, Alta.	Millyard, R. D.....	Woodstock.
Carruthers, R. G.....	Whitby.	Moffit, L. W.....	Toronto.
Carscadden, Miss H. M. B....	Galt.	Myers, H. C.....	St. Mary's.
Chantler, Miss G. W.....	Toronto.	Newton, Miss A. A.....	Tweed.
Coish, E. P., Ochre Pit Cove, Nfld.		Oliver, J., New Westminster, B.C.	
Courtice, A. R.....	Toronto.	Oliver, J. T.,	
Culbert, Miss E. G.....	Lucan.	New Westminster, B.C.	
Culham, J.....	Toronto.	Partridge, A. M.....	Barrie.
Dafoe, Miss M. W.....	Madoc.	Patrick, Miss G....	Yorkton, Sask.
Davis, Miss E. A.....	Toronto.	Patrick, Miss M....	Yorkton, Sask.
Davis, M. A. D.....	Tara.	Pearson, M. P.....	Hamilton.
Duggan, C. R.....	Brampton.	Pickering, Miss I. M....	Shelburne.
Dunlop, Miss E. A.....	Toronto.	Rickard, R. H.....	Bowmanville.
Fenton, J. H.....	Hamilton.	Robertson, Miss E. A....	Iroquois.
Firstbrook, H. M.....	Toronto.	Robinson, Miss C. E..	Kleinburg.
Fleming, R. R.....	Toronto.	Sanderson, H. H....	Caledon East.
Floyd, L. H.....	Toronto.	Schofield, Miss A. E. I...	Oshawa.
Gallinger, Miss G. E. Niagara Falls.		Sinclair, E. S.....	Burlington.
Gordon, J. I., Niagara-on-the-Lake.		Skilling, W. M.....	Teeswater.
Goulding, Miss E. I.....	Weston.	Smith, R. H., Niagara-on-the-Lake.	
Graham, T. S. H.....	Alliston.	Snider, C.....	Waterloo.
Granger, Miss E. M....	Collingwood.	Still, Miss A. F.....	Toronto.
Griffith, J. E.....	Wilfrid.	Stuart, A. M.....	St. Thomas.
Hall, H. A.....	Toronto.	Surerus, J. A.....	Zurich.
Hardy, J. H.....	Woodville.	Tucker, Miss K. E.....	Toronto.
Hay, Miss H. F.....	Listowel.	Tutt, J. M.....	Brantford.
Hazlewood, H. F., Edmonton, Alta.		vander Voort, M. C.....	Toronto.
Holmes, Miss M. J.....	Toronto.	Vowles, F. J.....	Toronto.
Horner, A. M....	Shawville, Que.	Walker, Miss R. H., St. Catharines.	
Horning, J. H.....	Waterdown.	†Wallace, P. A. W.....	Toronto.
Hubbell, Miss H. J.....	Marmora.	Ward, W. F.....	Wilton Grove.
Huether, A. L.....	Walkerton.	Watson, C. F.,	
Hung, Miss M. Foochow, China.		North Vancouver, B.C.	
Hutton, L. G.....	Windsor.	†Wesley, Miss B. L....	Newmarket.
Jamieson, A. D.....	Morrisburg.	White, G. B.....	Sardis, B.C.
Johnston, A. W.....	Kippen.	Wilkinson, W. A.....	Courtland.
Junkin, Miss M. K.....	Toronto.	Williams, D. W.....	Lambeth.
Kaiser, G. W.....	Howlett.	Wilson, E. M.....	Ottawa.
Kenny, Miss V. B.,		Wilson, M. A.....	Brampton.
New Westminster, B.C.		Woodger, W. P.....	St. Ola.
King, N. G.....	Moose Jaw, Sask.	Woon, N. G.....	Seagram.
LeGros, B.....	Toronto.	Young, Miss H. W....	Brampton.
Lewis, A. C.....	Kerwood.	Young, J. W., ...	Hatchley Station.

## Fourth Year.

Albright, L. S.....	Toronto.	Augustine, Miss M. E.,	
Allen, J. B.....	Toronto.	Port Colborne.	
Armstrong, F. A.....	Sardis, B.C.	Bentley, H. J.....	Gravenhurst.

Beynon, E. D.....	Bradford.	MacDonald, Miss M. D.,	Bloomfield.
Bishop, J. F.....	Toronto.	MacDowell, T. W.....	Maitland.
Bowles, W. F.....	Toronto.	McFadden, R. W. E.....	Markdale.
Brett, J. E.....	Chilliwack, B.C.	McGinn, Miss L. M.....	Orillia.
Brewster, H. S.....	Brantford.	McWilliams, W. R.....	Camden East.
Brown, F. S.....	Lakefield.	Maines, F. J. T.....	Tweed.
Burns, J. G.....	Toronto.	Manning, Miss M. V.....	Toronto.
Burt, A. M.....	Toronto.	Martindale, H. S.....	Alliston.
Chisholm, N. S.,		Mason, J. A. R.....	Stratford.
	North Battleford, Sask.	Millian, J. C.....	Saltford.
Cinnamon, Miss M. A....	Lindsay.	Morgan, Miss G.....	Woodbridge.
Clarke, Miss E. B.....	Trenton.	Moyer, J. W.....	St. Catharines.
Clipperton, O. L.....	Toronto.	Reid, J. S.....	Tillsonburg.
Copeland, R. C.....	London.	Reid, J. T.....	Durham.
Cornett, T. W.....	Gananoque.	Reid, Miss T.	
Crow, G. W.....	Welland.		New Westminster, B.C.
Cruikshank, Miss O. R.,	Wingham.	Rice, G. D. L.....	LePas, Man.
Dobson, Miss V. J.....	Toronto.	Richards, R. T.....	Westwood.
Edwards, Miss A. B.,	Calgary, Alta.	Robertson, H. G.....	Toronto.
Flanders, Miss M. M.....	London.	Rodd, G. L.....	Cobalt.
Found, N.....	Bowmanville.	Rodd, R. S.....	Cobalt.
Going, Miss A. L.....	Port Hope.	Rosborough, A. E....	Peterborough.
Heath, H. J.....	Orton.	Ruston, W. J.....	Lemberg, Sask.
Herington, Miss B. C....	Toronto.	Scott, Miss H. E.....	Toronto.
Hopper, A. E.....	Ottawa.	Shourds, Miss O. I....	Wellington.
Houghton, W. M.,		Sifton, H. B.....	Cairngorm.
	Newton Robinson.	Smith, W. M.....	Currie's Crossing.
Howell, H. D.....	Toronto.	Smyth, C. W.....	Fort Frances.
James, P. E.....	St. Thomas.	Southcombe, W. J. S....	St. Mary's.
Jeffs, G. D.....	Toronto.	Stafford, R. P.....	Cardinal.
Jones, Miss D. E. K.,		Staples, W. E.....	St. Thomas.
	Victoria, B.C.	Stouffer, R. P.....	Toronto.
Kearney, Miss M.....	Renfrew.	Taylor, J. W.....	Peterborough.
†Lackner, Miss F. V. M.,	Chesley.	Thomson, Miss A. J. B.,	Strathroy.
Lawrence, C. W.....	Toronto.	Treleaven, C. L.....	Ripley.
Luke, Miss D. H.....	Oshawa.	Wigle, Miss R. M....	Amherst, N.S.
McCamus, W. R.....	London.	Willows, C. E.....	Carlingford.
McCauley, Miss I. H....	Belleville.	Wood, C. B.....	Oxford Centre.
McCoy, Miss K. A.....	Madoc.	Zimmerman, R. E.....	Norval.

### Occasional Students.

Akajawa, Y.....	Tokyo, Japan.	Cotton, W. W.....	Newtown, Nfld.
Andrew, T. W. F. G.....	Norwood.	Cruse, G. A.....	London, Eng.
Arms, W. J.....	Walsall, Eng.	Elliott, A. E.....	Brantford.
Austen, T. C.....	St. George.	Ellison, H. V.....	Toronto.
Bamford, A. F.....	Reading, Eng.	Fiddes, H. S.....	Burford.
Beach, S. M.....	Oxford Mills.	Flook, F. R.....	Willowdale.
Belknap, E. A.....	Toronto.	Foster, J. L.....	Toronto.
Beveridge, J. D.....	Calgary, Alta.	Fray, E.....	Mytholmkoyd, Eng.
Breithaupt, W. W.....	Berlin.	Gould, J. N.....	Stratford.
Bunt, H. A.....	Woodstock.	Green, B. F.....	Toronto.
Bush, Miss S. E.....	Morrisburg.	Halbert, A.....	Primrose.
Carmichael, T. A....	North Bay.	Halfyard, L.,	Ochre Pit Cove, Nfld.
Catalano, M.....	Rome, Italy.	Harker, M. H.....	Renwick, Eng.
Cochrane, J. C....	Manitowaning.	Harston, E.....	Madoc.

Hickson, J. F.....	Richmond Hill.	Pawson, H.....	Earby, Eng.
Hie, A. C.....	Centreton.	Peckitt, T. L.....	Clinton.
Hone, A. W.....	Petrolia.	Pugsley, E. E.....	Vancouver, B.C.
Humphrey, H. L.....	Dresden.	Purchase, F. G....	Exploits, Nfld.
Hunton, Miss M. D.,		Quaife, C. H.....	Huntsville.
	Sackville, N.B.	Rockham, W.....	Bedford, Eng.
Knox, G.....	Toronto.	Schwandt, Miss S.....	Fordwich.
Lovelace, J. U.....	Yarker.	Seymour, R. M.....	Toronto.
McCarten, R. J.....	Erin.	Shapter, C. P.....	Campbellford.
Mabson, F. G.,	Acton, London, Eng.	Summers, B. S.....	Winchester.
Madden, F. W.....	Sutton West.	Taylor, J. D.....	Galt.
Martin, W. G.....	Calgary, Alta.	†Watson, W. H.....	Toronto.
Millar, Miss A. C. B.....	Toronto.	Watts, H. W.....	Toronto.
Mutton, H. H.....	Colborne.	Whaley, H. A.....	Brownsville.
Neff, Miss E. M.....	Hamilton.	Wilkinson, H.....	Toronto.
Newman, R. E.....	Crystal Rock.	Wright, J. L.....	Victoria, P.E.I.
†Parsons, W. C....	Darlington Stn.		

### Summary.

First Year Students .....	179
Second Year Students.....	119
Third Year Students.....	95
Fourth Year Students.....	79
Occasional Students.....	60
Total.....	532



## APPENDIX

### TRINITY COLLEGE.

#### First Year.

Armstrong, G. H.....	Toronto.	Martin, C. K. C.....	Hamilton.
Beasley, T. A.....	Hamilton.	Milne, Miss J. M.....	Belleville.
Bishop, Miss M. L....	Owen Sound.	Muller, Miss D. L.,	New York, N.Y.
Calverley, H. S.....	Oakville.	Oakley, T.....	Craigvale.
Campbell, W. G.....	Toronto.	Orr, Miss M. B.....	Woodbridge.
Chisholm, J. M.....	Oakville.	Panton, Miss J.....	Milton West.
Clench, Miss E.....	St. Catharines.	Peppiatt, A. T.....	Toronto.
Coutts, Miss R.....	Thamesville.	Pettem, H. R.....	Lyn.
Crossley, Miss K. M....	Oakville.	Philp, W. G.....	Toronto.
Donaldson, W. D. E....	Ottawa.	Plummer, J. O.....	Toronto.
Duncan, Miss J. R.....	Chatham.	Richards, R. E. M..	Downage, Eng.
Eager, Miss R. C.....	Morrisburg.	Ridout, Miss J. H....	Port Elgin.
Evans, Miss M. E.....	Owen Sound.	Ross, Miss F. C....	Moose Jaw, Sask.
Gillan, C. R.....	Saanichton, B.C.	Smith, R. N.....	Leamington.
Graham, Miss A. V.....	Toronto.	Stewart, Miss S. B.....	Ottawa.
Hanes, Miss E. A.....	Toronto.	Talbot, Miss C. M.....	Toronto.
Harron, Miss Z. N.....	Hamilton.	Trapp, Miss J. E.,	
Howard, V. Maclean....	Toronto.		New Westminster, B.C.
Ingersoll, J. H.....	St. Catharines.	Turner, E. A.....	Brockville.
Irwin, T. A.....	Hamilton.	Vernon, A. A. Harcourt...	Toronto.
Johnson, J. L.....	Soperton.	Warren, P. S.....	Brechin.
Kidd, Miss B. E....	Burritt's Rapids.	Washington, F. P. L....	Hamilton.
McCarthy, Miss L. P....	Toronto.	Waters, Miss M. T....	Belleville.
McClenaghan, V. S. C....	Ottawa.	Young, M. C. deB. ..	Ripley, Eng.
Macara, J. L. M.....	Ottawa.		

#### Second Year.

Baker, C. E., Prince Albert, Sask.		Hoy, Miss N. B.,	
Bevan, E. C.....	Niagara Falls.		New Westminster, B.C.
Bidwell, Miss F. L. D.,	Kingston.	Kennedy, H. A. T.....	Hamilton.
Brethour, E. J., Jr.....	Hamilton.	Kennedy, I. E.....	Leamington.
Burns, Miss D.....	Oshawa.	MacBain, Miss M....	Niagara Falls.
Caverhill, E. A. H....	Hanley, Sask.	Mitchell, R. A.....	Tamworth.
Cook, G. S. H.....	Toronto.	Newham, Miss E. J....	Arnprior.
Coutts, Miss A. J....	Thamesville.	Orr, H. E.....	Perth.
Cowie, Miss H.....	Ottawa.	Robertson, Miss A. M.,	
Daw, W. S.....	Hamilton.		Niagara Falls.
Dixon, A. J.....	Iroquois.	Rogers, J.....	Oakville.
Hazell, W.....	Hamilton.	Scudamore, H. B.....	Harriston.
Howard, W. R.....	Toronto.	Seale, T. E.....	Granby, Q.
		Smith, C. M.....	Glenboro, Man.

#### Third Year.

Anderson, Miss A. W.....	Ottawa.	Clench, Miss M....	St. Catharines.
Austin, Miss M.....	Fenelon Falls.	Cluff, R. A.....	Stratford.
Bradfield, Miss M. L....	Morrisburg.	Cook, Miss M. E. A.....	Toronto.
Carmichael, Miss E. C....	Toronto.	Cumpston, B. L.....	Toronto.
Childs, S.....	Northampton, Eng.	Dixon, Miss K. E.....	Iroquois.



Drew, C. J. R.....	Guelph.	Lundy, Miss K. S. . . .	Niagara Falls.
Ferris, R. H. C.....	Garden River.	McGregor, Miss H. M.,	Gore Bay.
Grier, Miss R. M.....	Toronto.	Machell, H. E.....	Toronto.
Harding, Miss M. J.....	Pickering.	Moffat, Miss R. I.....	Dundas.
Harrington, Miss M. L.,	Wellington.	Ralph, R. V.....	Dundas.
Hendy, R. A.....	Isleworth, Eng.	Ryder, W. E.....	Kingston.
Hill, Miss L. M. D.	Gravenhurst.	Sommerville, W. E.....	Toronto.
Hunter, Miss L. P.....	Toronto.	Spragge, G. W.....	Cobourg.
Keyes, C.....	Dartford, Eng.	Stent, C. F.....	Red Deer, Alta.
Keys, D. A.....	Toronto.	Turner, F. M., Jr...	Pittsburgh, Pa.
Lawson, A. T.....	London.	Wilkins, R. P...	Wetaskiwin, Alta.
Leake, H. A.....	Hagersville.	Williams, T. J...	Blairmore, Alta.

#### Fourth Year.

Burnett, Miss J. K.,	Westmount, Montreal, Q.	Harte, Miss K. S.....	Hamilton.
Burns, Miss G.....	Oshawa.	Hayes, H. S.....	Trenton.
Clarke, Miss M. J.....	Toronto.	Hone, A. D.....	Petrollea.
Conway, Miss A. M.....	Uxbridge.	Matheson, G. M.....	Hamilton.
Cook, Miss F. H.....	Toronto.	Reed, Miss O. A.,	Hastings, Barbadoes, W.I.
Drumm, A. C.....	Bowmanville.	Reid, Miss A. C.,	Portage du Fort, Q.
Evans, Miss M. A.....	Toronto.	Rowe, C. E.....	Blenheim.
French, Miss D. C...	Fenelon Falls.	Sheppard, R. R.....	Montreal, Q.
Gahan, F.....	London.	Turney, W. C.....	Toronto.
Graham, Miss M. R.....	Toronto.	Waddington, Miss V. D...	Toronto.
Grenside, Miss A. H.....	Guelph.	Wilkins, Miss G. M.....	Norwood.
Griffin, A. K.....	Toronto.	Wood, Miss H. F.....	Orillia.
Griffin, S. P.....	Toronto.		

#### Occasional Students.

Charters, H. P.....	Brampton.	Melville, R.....	Toronto.
Dixon, S. N.....	Osnaburgh.	Palmer, R. F.....	Peterborough.
Douglas, D. D.....	Waterdown.	Pashler, C. F.....	Toronto.
Gooding, S. W.....	Consecon.	Paull, F. H.....	London.
Hare, P.....	Blackrock, Ireland.	Taylor, F. I.....	Allandale.
Mackey, W. E.....	Toronto.	Wallace, N. C.....	Woodbridge.

#### Summary.

First Year Students.....	48
Second Year Students.....	25
Third Year Students.....	34
Fourth Year Students.....	25
Occasional Students.....	12
Total.....	144

**ST. MICHAEL'S COLLEGE.****First Year.**

Austin, G. L.....	Port Arthur.	McCabe, T. E.....	Toronto.
Barker, J. J.....	Nipigon.	McDonagh, J. A.....	Toronto.
Barry, Miss F.....	Corry, Pa.	McDonald, J. G.....	Little Current.
Brick, M. G.....	Ennismore.	McGowan, E. S.....	Brechin.
Brown, A. A.....	Hamilton.	McGrath, M. J.....	Atherley.
Clair, J. M....	Niagara-on-the-Lake.	McGuire, Miss E.....	Toronto.
Clear, Miss M. E.....	Ingersoll.	McManamy, J. W.....	Thorold.
Collins, J. B.....	Lindsay.	McMorrow, J. A.....	Waddington, N.Y.
Corrigan, J. F.....	Atherley.	Malcolm, Miss A. H.....	Toronto.
Davis, Miss M. A.....	Jockvale.	Markle, L. A.....	Toronto.
Dickson, A. J.....	Toronto.	Murphy, Miss M....	Carleton Place.
Dorrell, E. P....	Vancouver, B.C.	Murphy, J. P.....	Fort William.
Dowdall, Miss E.....	Almonte.	Nicholson, J. S....	West Monkton.
Downey, Miss M. G.....	Corry, Pa.	O'Brien, J.....	Stratford.
Ellard, Miss M. C.,	Missoula, Mont.	O'Connell, J. R.....	Toronto.
Feeney, J. C.....	Marmora.	O'Flaherty, J. G.....	London.
Fitzgerald, J. C.....	Toronto.	Post, J. A.....	Buffalo, N.Y.
Fitzpatrick, G. L....	Newark, N.J.	Reynolds, G. A.....	London.
Flanagan, Miss E....	Fort William.	Smith, Miss M. E.....	Toronto.
Flanagan, J.....	Chapleau.	Smith, W.....	Barrie.
Forestell, T. F.....	Campbellford.	Smyth, Miss C. M.....	Bolton.
Gendron, Miss M. M.,	Penetanguishene.	Traynor, A. V.....	Owen Sound.
Gillogly, V. J.....	Lindsay.	Woods, L. P.....	Toronto.
Guithard, T. A.....	Windsor.	Young, C. E.....	Ennismore.
Kelly, Miss A. M.....	Thorold.		

**Second Year.**

Armstrong, S. J.....	Toronto.	McCarthy, J.....	Hastings.
Bunyan, E. E.....	North Bay.	McQuade, Miss G. V....	Stratford.
Burns, Miss M. G.....	Toronto.	McTague, C. P.....	Guelph.
Collins, J. P.....	Indian River.	Madigan, Miss N. I....	Deseronto.
Corkery, K. A.....	Peterborough.	Mungovan, Miss M. K.,	Orangeville.
Duffey, Miss E. F.....	Lima, Ohio.	O'Reilly, Miss B. T....	Wildfield.
*Duggan, W. V.....	Toronto.	Payette, H. J., ...	Penetanguishene.
Ellard, H. R.....	Toronto.	Ryan, G. S.....	Toronto.
Gallivan, T. J....	Chatham, N.B.	Temple, N. B.....	Toronto.
Garvey, J. J.....	Peterborough.	Troy, M. L.....	Chatham, N.B.
Hatrick, W. J.....	Peterborough.	Whelan, W. E.....	Westport.
Labelle, O. H....	Shelldrake, Mich.		
Long, Miss I.....	Whitby.		

**Third Year.**

Bohan, C. C.....	Havelock.	Doyle, J. B.....	Toronto.
†Clark, Miss M. E.....	Toronto.	Drohan, D. J.....	Eganville.
Coughlan, Miss A. T....	Hastings.	Fahey, J. P.....	Elgin.
Dee, A. A.....	Toronto.	Hammond, F. A.....	Cayuga.

Johnston, Miss E. C. ....	Toronto.	O'Neill, D. J. ....	Toronto.
Lellis, A. T. ....	Toronto.	Pocock, J. H. ....	London.
MacBrady, R. W. ....	Port Arthur.	Power, Miss M. ....	Toronto.
McGuire, T. J. ....	Hoath Head.	Reddin, J. J. ....	Toronto.
McSweeney, Miss M. T. ....	Toronto.	Ryan, Miss G. ....	Mitchell.
Maher, G. J. ....	Peterborough.	Ryan, J. M. ....	Wellsville.
Malone, A. ....	Toronto.	Sheehan, D. J. ....	Indian River.
Mulligan, D. G. ....	Sudbury.	Sheridan, J. J. ....	Brechin.
Murray, W. H. ....	Toronto.	Sullivan, J. J. ....	Dundas.
Nealon, M. J. ....	Toronto.	Tansey, J. E., Vera Cruz, Mexico.	
O'Connor, T. S. ....	Gananoque.	Walsh, J. B. ....	Toronto.
O'Leary, J. ....	Peterborough.		

#### Fourth Year.

Dillon, D. L. ....	Burlington, Texas.	Murphy, Miss A. ....	Toronto.
Donovan, C. P. ....	Wellsville, N.Y.	O'Brien, P. L. ....	Hamilton.
Gonter, F. H. ....	Wellsville, N.Y.	O'Neil, J. R. ....	North Bay.
Guerard, I. A. ....	Port Arthur.	Sharpe, W. C. ....	Sarnia.
Kehoe, J. F. ....	Bolton.		

#### Occasional Student.

McArdle, Miss E. ....	Toronto.
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#### Summary.

First Year Students.....	49
Second Year Students.....	24
Third Year Students.....	31
Fourth Year Students.....	9
Occasional Students.....	1
Total.....	114

#### GRAND SUMMARY.

University of Toronto.....	757
University College.....	1027
Victoria College.....	532
Trinity College.....	144
St. Michael's College.....	114
Total.....	2574

## FACULTY OF MEDICINE.

## REGISTER OF STUDENTS, 1913-1914.

## First Year—Class of 1918,

Agnew, G. H.....Toronto, Ont.	Fraser, D.....Stratford, Ont.
Aitchison, W. S.....Elora, Ont.	Fraser, G. M.....Toronto, Ont.
Anderson, Miss A. J..Toronto, Ont.	
Apps, C. W. C. O.:Brantford, Ont.	Garbutt, C. T. P.....Norham, Ont.
Baker, R. H.....Parkhill, Ont.	Gauld, W. H.....Tamsui, Formosa.
Banting, O. F.....Lucan, Ont.	Geddes, W. A. S....Ailsa Craig, Ont.
Bartley, Miss K. McB. Toronto, Ont.	Gilmer, E. R.....Atwood, Ont.
Batten, W. H.....Toronto, Ont.	Gray, W. H.....Toronto, Ont.
Bentley, G. A....Port Arthur, Ont.	
Benwell, C. E....Birmingham, Sask.	Hare, R. B.....Rosetown, Sask.
Bicknell, N. J.....Dunnville, Ont.	Harris, W.....Toronto, Ont.
Boles, W. P. ....Stratford, Ont.	Henry, W. J.....Markdale, Ont.
Boyd, Miss G. L.....Toronto, Ont.	Hill, C. E.....Richmond Hill, Ont.
Bromley, A. J.....Toronto, Ont.	Hill, M. J. ....Hamilton, Ont.
Brown, C. C.....Stayner, Ont.	Hogarth, W. P....Fort William, Ont.
Brymer, N. S.....Toronto, Ont.	Holmes, A. B., N. Westminster, B.C.
Bulmer, Miss M. A. C.....Toronto, Ont.	Holmes, W. H.....Toronto, Ont.
Bunt, M. H.....Collingwood, Ont.	Howard, F. C.....Toronto, Ont.
Burns, B. R.....Toronto, Ont.	Huether, A. L....Walkerton, Ont.
	Husband, A. C.....Kemble, Ont.
Cain, R. F., Sault Ste. Marie, Ont.	Jones, H. C.....Goderich, Ont.
Callum, D. R.....Toronto, Ont.	Joyce, R. E.....Bronte, Ont.
Carlisle, A. M., Peterborough, Ont.	
Clark, H. J. ....Georgetown, Ont.	Kennedy, R. B. ....Kingsville, Ont.
Cohen, B.....Toronto, Ont.	Kennedy, Miss C. I. M.
Copp, J. C.....Clinton, Ont.	Wingham, Ont.
Coughlin, H. J.....Toronto, Ont.	
Coulson, E. G....Leamington, Ont.	Lazenby, F. S.....Toronto, Ont.
Cox, M. A.....Toronto, Ont.	Leach, J. W.....Meaford, Ont.
Cryderman, W. J....Walkerton, Ont.	Levy, N.....Toronto, Ont.
Cunningham, W. H..Greenock, Ont.	Lloyd, I. M.....Newmarket, Ont.
	Logie, W. D.....Sarnia, Ont.
Dafoe, W. A.....Madoc, Ont.	Low, D. M. ....Vancouver, B.C.
Davis, R. ....Kirkton, Ont.	
Deavitt, J. B.....Toronto, Ont.	Malcolmson, A. S.
Devine, C. J.....Thornbury, Ont.	St. Catharines, Ont.
Dowler, V. B....Fort William, Ont.	Meader, Miss F. M....Toronto, Ont.
Doyle, R. H.....Toronto, Ont.	Merifield, R. C.
	Prince Albert, Sask.
Eadie, G. S.....Toronto, Ont.	Morris, R. M. ....Middleton, N.S.
Edmonds, L. C.....Toronto, Ont.	Mulligan, C. V.....Omeme, Ont.
Edmonds, W. B.....Toronto, Ont.	Macallum, A. D.....Toronto, Ont.
Eede, J. R. L....Leamington, Ont.	McCallum, D.....Toronto, Ont.
	McClelland, H. C....Toronto, Ont.
Farmer, G. R. D....Ancaster, Ont.	McCosh, J. T.....Paris, Ont.
Feader, H.....Toronto, Ont.	MacDonald, J. D., Teeswater, Ont.
Feick, S. B....New Hamburg, Ont.	McIntosh, P. D.....Toronto, Ont.
Findlay, C. A.....Manotick, Ont.	McLeod, N. D....Hawkestone, Ont.
Forge, F. W. ....Moose Jaw, Sask.	McKay, D. W.
	New Westminster, B.C.

McKenzie, W. L. . . . .	Toronto, Ont.	Seigel, M. . . . .	Hamilton, Ont.
McKinnon, N. E. . . . .	Priceville, Ont.	Simpson, R. W. . . . .	Waldemar, Ont.
McNally, H. J. . . . .	Berlin, Ont.	Sinclair, J. . . . .	Toronto, Ont.
Macnamara, H. O. . . . .	Toronto, Ont.	Snider, Miss L. H. . . . .	Toronto, Ont.
McNevin, F. P. . . . .	Uxbridge, Ont.	Spence, R. J. . . . .	Orangeville, Ont.
Macpherson, A. W. . . . .	St. Thomas, Ont.	Steinhauer, W. B. . . . .	Morley, Alta.
		Street, H. W. . . . .	Owen Sound, Ont.
Nesbitt, J. H. . . . .	Toronto, Ont.	Stuart, L. M. . . . .	Galt, Ont.
Owen, T. . . . .	Toronto, Ont.	Sullivan, B. C. . . . .	Toronto, Ont.
		Sullivan, H. . . . .	Bruce Mines, Ont.
		Swan, W. D. . . . .	Brucefield, Ont.
Parks, W. R. . . . .	Toronto, Ont.	Tucker, R. M. . . . .	Allanburg, Ont.
Pearlman, D. . . . .	Toronto, Ont.	Turnbull, A. . . . .	Canfield, Ont.
Pears, Miss A. K. . . . .	West Toronto.	Turney, H. . . . .	Trenton, Ont.
Pedley, W. H. . . . .	Woodstock, Ont.	Urquhart, G. T. . . . .	Owen Sound, Ont.
Price, C. K. . . . .	Toronto, Ont.	Van Etter, O. . . . .	Wardsville, Ont.
Ramsey, G. H. S. . . . .	Toronto, Ont.	Wagner, L. . . . .	Berlin, Ont.
Rankin, R. W. . . . .	North Bay, Ont.	Walker, F. N. . . . .	Grahamsville, Ont.
Reaume, J. S. . . . .	Windsor, Ont.	Wallwin, W. E. M. . . . .	Toronto, Ont.
Reuber, R. N. . . . .	Hanover, Ont.	Weissgerber, L. A. . . . .	Calgary, Alta.
Riseborough, E. C. . . . .	Fargo, Ont.	Werden, W. A. . . . .	Mimico, Ont.
Robertson, J. M. . . . .	Toronto, Ont.	West, S. E. T. . . . .	Angus, Ont.
Roger, I. B. . . . .	Farm School, N.C.	Whealy, A. T. . . . .	Toronto, Ont.
Russell, N. H. . . . .	Brampton, Ont.	Wheatley, W. H. . . . .	Toronto, Ont.
Rymal, L. C. . . . .	Hamilton, Ont.	Wilkinson, Miss M. E. . . . .	Toronto, Ont.
Sauder, P. . . . .	Markham, Ont.		
Seymour, R. A. . . . .	Vancouver, B.C.		

### Second Year.—Class of 1917.

Adams, J. F. . . . .	Hanover, Ont.	Douglas, J. S. . . . .	Dunnville, Ont.
Alton, J. A. . . . .	Edmonton South, Alta.	Edis, J. F. . . . .	Toronto, Ont.
Archibald, C. H. . . . .	Toronto, Ont.	Elkerton, F. J. . . . .	Chamberlain, Sask.
Banting, F. G. . . . .	Alliston, Ont.	Elliot, H. A. . . . .	Midland, Ont.
Barnes, W. B. . . . .	Toronto, Ont.	Erb, I. H. . . . .	Sebringville, Ont.
Battley, J. C. S. . . . .	Sarnia, Ont.	Evelyn, S. J. . . . .	Annotto Bay, Jamaica.
Becker, Miss M. B. . . . .	Toronto, Ont.	Findlay, D. G. . . . .	Toronto, Ont.
Blayney, Y. . . . .	Toronto, Ont.	Finlayson, D. R. . . . .	Lochalsh, Ont.
Bond, C. E. . . . .	Galt, Ont.	Frain, C. E. . . . .	Norwich, Ont.
Boone, F. H. . . . .	Toronto, Ont.	Fretwell, G. M. . . . .	Waterdown, Ont.
Bray, Miss M. . . . .	Toronto, Ont.	Found, N. . . . .	Bowmanville, Ont.
Brisson, S. . . . .	St. Joseph, Ont.	Gilchrist, J. A. . . . .	Toronto, Ont.
Brown, W. E. . . . .	Toronto, Ont.	Gimby, J. E. . . . .	Sault Ste Marie, Ont.
Boyce, A. J. . . . .	Goderich, Ont.	Glancy, J. A. R. . . . .	Newmarket, Ont.
Cale, Miss R. C. . . . .	Toronto, Ont.	Graham, M. G. . . . .	Rodney, Ont.
Cameron, G. C. . . . .	Toronto, Ont.	Grisdale, A. . . . .	Niagara Falls, Ont.
Carlisle, V. . . . .	Windsor, Ont.	Henderson, W. I. . . . .	Toronto, Ont.
Clarke, G. R. . . . .	Toronto, Ont.	Hipwell, F. W. W. . . . .	Alliston, Ont.
Cornhill, B. S. . . . .	Athens, Ont.	Hutchinson, E. D. . . . .	Sarnia, Ont.
Crouch, A. E. H. . . . .	Fenwick, Ont.		
Cromarty, R. P. . . . .	Toronto, Ont.		



- Irvine, H. J. . . . . Sarnia, Ont.  
 Jamieson, W. G. . . . . Camborne, Ont.  
 Jeffrey, A. M. . . . . Toronto, Ont.  
 Jeffs, G. D. . . . . Eglinton, Ont.  
 Johnston, Miss M. E. D.,  
                                 Kippen, Ont.  
 King, J. L. . . . . Hornby, Ont.  
 Kirkup, N. N. . . . . Barrie, Ont.  
 Lane, W. R.,  
                                 New Westminster, B.C.  
 Leech, F. W. . . . . Newboro, Ont.  
 Little, W. C. . . . . Barrie, Ont.  
 Loney, B. S. . . . . Toronto, Ont.  
 Malyon, R. H. . . . . Saskatoon, Sask.  
 Mathers, J. A. . . . . Stroud, Ont.  
 Miller, C. O. . . . . Sioux Falls, S.D.  
 Mills, C. V. . . . . Osborne, Ont.  
 Mitchell, F. R. . . . . Meaford, Ont.  
 Mitchell, H. A. . . . . Prince Albert, Sask.  
 Mitchell, I. N.,  
                                 Welland Junction, Ont.  
 Mitchell, W. T. B. . . . . Watford, Ont.  
 Montgomery, A. . . . . Toronto, Ont.  
 McClelland, J. C. . . . . Toronto, Ont.  
 McClinton, W. S. . . . . Elmvale, Ont.  
 MacDonald, J. H.,  
                                 Smith's Falls, Ont.  
 McDonald, J. M. . . . . Lakeside, Ont.  
 Macdougall, C. S. . . . . Kincardine, Ont.  
 MacKay, A. . . . . Embro, Ont.  
 Mackenzie, A. E.,  
                                 Oil City, Penn., U.S.A.  
 MacKenzie, J. W. . . . . Toronto, Ont.  
 MacKenzie, F. M. . . . . Windsor, Ont.  
 McKeough, W. S. . . . . Chatham, Ont.  
 MacKinlay, R. . . . . Aberarder, Ont.  
 McKittrick, R. W. . . . . Toronto, Ont.  
 Nettleton, E. . . . . Toronto, Ont.  
 Owen, H. H. . . . . Vancouver, B.C.  
 Parney, F. S. . . . . Edmonton, Alta.  
 Rae, C. A. . . . . Bedford, N.Y.  
 Reddick, J. W. . . . . Toronto, Ont.  
 Reid, J. S. . . . . Tillsonburg, Ont.  
 Shannon, P. R. . . . . St. Thomas, Ont.  
 Scott, C. V. . . . . Toronto, Ont.  
 Scott, G. R. . . . . Peterborough, Ont.  
 Scott, W. J. . . . . Richmond Hill, Ont.  
 Shirton, G. K. . . . . Dunnville, Ont.  
 Soules, M. H. . . . . Oshawa, Ont.  
 Sparks, W. E. L. . . . . Toronto, Ont.  
 Steinmetz, Miss I. D.,  
                                 Fruitland, P.O. Ont.  
 Stevenson, G. H. . . . . Hamilton, Ont.  
 Stoll, E. L. . . . . Niagara Falls, Ont.  
 Strachan, J. G. . . . . Toronto, Ont.  
 Sykes, G. F. . . . . Woodstock, Ont.  
 Tate, E. C. . . . . St. Catharines, Ont.  
 Tew, W. P. . . . . Oil Springs, Ont.  
 Thompson, C. E. . . . . Hamilton, Ont.  
 Veitch, H. D. . . . . Winterbourne, Ont.  
 Wells, C. A. . . . . Toronto, Ont.  
 White, K. P. . . . . Gravenhurst, Ont.  
 White, T. E. . . . . Hamilton, Ont.  
 Whitney, K. H. . . . . Atherley P.O. Ont.  
 Wigle, D. St. J. . . . . Windsor, Ont.  
 Wilson, D. G. . . . . Gananoque, Ont.

### Third Year—Class of 1916.

- Armstrong, G. W. . . . . Toronto, Ont.  
 Armstrong, R. H. . . . . Clarksburg, Ont.  
 Ballantyne, T. W. . . . . Stratford, Ont.  
 Barry, J. E. . . . . Niagara Falls, Ont.  
 Bethune, H. N. . . . . Toronto, Ont.  
 Black, C. N. . . . . Calgary, Alta.  
 Blake, W. A. . . . . Hamilton, Ont.  
 Blakely, A. M. . . . . Chatham, Ont.  
 Bleakley, T. W. . . . . Kindersley, Sask.  
 Bragg, N. W. . . . . Brantford, Ont.  
 Broughton, E. A. . . . . Whitby, Ont.  
 Brown, P. B. . . . . Toronto, Ont.  
 Cameron, G. M. . . . . Hamilton, Ont.  
 Clarke, E. K. . . . . Toronto, Ont.  
 Cohen, I. . . . . Sault Ste. Marie, Ont.  
 Connell, W. C. . . . . Prescott, Ont.  
 Corcoran, D. . . . . Toronto, Ont.  
 Crawford, J. S. . . . . Sarnia, Ont.  
 Cringan, Miss L. W. . . . . Toronto, Ont.  
 Curry, P. W. M. . . . . Trenton, Ont.  
 Dales, L. W. . . . . Drayton, Ont.  
 Dalton, R. E. . . . . Toronto, Ont.  
 Davis, G. A. . . . . Toronto, Ont.  
 Davis, D. . . . . Toronto, Ont.  
 Dickson, J. A. . . . . Toronto, Ont.  
 Dixon, H. A. . . . . Toronto, Ont.

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| Dobbin, G. M. . . . . Toronto, Ont.              | MacMahon, V. P. . . . . St. Catharines, Ont. |
| Dobson, T. L. . . . . Utopia, Ont.               | MacDonald, A. R. . . . . Jarvis, Ont.        |
| Fenwick, C. P. . . . . St. Johns, Nfld.          | McDonald, J. L. . . . . Dresden, Ont.        |
| Freel, H. B. . . . . Stouffville, Ont.           | MacLennan, D. S. . . . . Toronto, Ont.       |
| Furey, N. . . . . Toronto, Ont.                  | MacMurchy, J. A. . . . . Acton, Ont.         |
| George, R. . . . . Toronto, Ont.                 | McNair, A. Y. . . . . Moose Jaw, Sask.       |
| Gillies, A. E. . . . . Port Hope, Ont.           | McPherson, E. E. . . . . Cedar Springs, Ont. |
| Givens, W. C. . . . . Toronto, Ont.              | Nash, H. C. . . . . Stony Creek, Ont.        |
| Graham, S. G. . . . . Lobo, Ont.                 | Naylor, A. H. . . . . Lindsay, Ont.          |
| Graydon, W. L. . . . . Toronto, Ont.             | Norwich, A. C. . . . . Toronto, Ont.         |
| Greaves, A. V. . . . . Toronto, Ont.             | Patterson, Miss O. G. Toronto, Ont.          |
| Greenaway, A. C. . . . . Cambray, Ont.           | Peacock, P. . . . . Stroud, Ont.             |
| Gregory, A. W. . . . . Kent Bridge, Ont.         | Pollock, F. R. . . . . Toronto, Ont.         |
| Hagerman, A. E. . . . . Parkland, Alta.          | Rabinowitch, I. M. . . . . Toronto, Ont.     |
| Hargrave, H. R. . . . . Toronto, Ont.            | Rawlings, H. A. . . . . Toronto, Ont.        |
| Harvie, R. M. . . . . Coldwater, Ont.            | Rehill, J. R. . . . . Lumsden, Sask.         |
| Hessian, H. A. . . . . Toronto, Ont.             | Robson, R. B. . . . . Petrolea, Ont.         |
| Hetherington, H. B. . . . . St. Catharines, Ont. | Rutherford, W. B. . . . . Blenheim, Ont.     |
| Hill, L. R. . . . . Toronto, Ont.                | Sarjeant, P. A. . . . . Barrie, Ont.         |
| Hodgins, W. E. . . . . Lucan, Ont.               | Scott, C. I. . . . . Camilla, Ont.           |
| Isaacson, A. . . . . Toronto, Ont.               | Scullard, G. . . . . Chatham, Ont.           |
| Jackson, A. B. . . . . Simcoe, Ont.              | Sharpe, J. H. . . . . Toronto, Ont.          |
| Janes, R. M. . . . . Warwick, Ont.               | Shaw, L. O. . . . . Dawson City, Yukon.      |
| Johnson, F. M. . . . . St. Thomas, Ont.          | Shouldice, E. E. . . . . Calgary, Alta.      |
| Johnston, W. J. . . . . Craigvale, Ont.          | Sinclair, T. A. . . . . Walkerton, Ont.      |
| Jones, W. E. . . . . Kerrisdale, B.C.            | Smith, F. R. . . . . Barrie, Ont.            |
| Knox, A. W. . . . . Loughheed, Alta.             | Snider, R. J. . . . . Toronto, Ont.          |
| Lapp, A. D. . . . . Toronto, Ont.                | Spearing, F. . . . . Batteau, Ont.           |
| Lewis, C. T. . . . . Windsor, Ont.               | Speers, A. L. . . . . Merton, Ont.           |
| Lewis, G. F. . . . . Windsor, Ont.               | Stanley, J. A. . . . . Lucan, Ont.           |
| Lindsay, A. R. . . . . Toronto, Ont.             | Stobie, G. H. . . . . Port Lock, Ont.        |
| Linton, J. A. . . . . Puce, Ont.                 | Switzer, B. C. . . . . Norval, Ont.          |
| Little, N. H. . . . . Trenton, Ont.              | Tanner, G. E. . . . . Sarnia, Ont.           |
| Locke, W. B. . . . . Toronto, Ont.               | Thomson, A. . . . . Bendale, Ont.            |
| Lowe, W. A. . . . . Haileybury, Ont.             | Thomas, N. O. . . . . St. Thomas, Ont.       |
| Maitland, H. B. . . . . Toronto, Ont.            | Tisdall, F. F. . . . . Toronto, Ont.         |
| Martin, W. E. . . . . Regina, Sask.              | Tomlinson, N. F. . . . . Willowdale, Ont.    |
| Matheson, A. . . . . Toronto, Ont.               | Tryon, Miss M. . . . . Priceville, Ont.      |
| Moody, A. J. . . . . Berlin, Ont.                | Wallace, N. A. . . . . Toronto, Ont.         |
| McAlister, H. C. . . . . Exeter, Ont.            | Warriner, C. H. . . . . Toronto, Ont.        |
| MacCallum, A. J. . . . . North Battleford, Sask. | Wheeler, T. D. . . . . Winnipeg, Man.        |
| McCowan, W. P. . . . . Toronto, Ont.             | Willoughby, C. J. M. Toronto, Ont.           |
| McCullough, J. C. . . . . Walters Falls, Ont.    | Wilson, Miss B. H. . . . . Gananoque, Ont.   |
| MacDonald, A. E. . . . . Brantford, Ont.         | Wilson, F. B. G. . . . . Waterford, Ont.     |
|  | Wilson, L. R. . . . . Toronto, Ont.          |
|  | Wilson, M. J. . . . . Toronto, Ont.          |
|  | Young, Miss A. M. . . . . Binbrook, Ont.     |
|  | Young, H. G. . . . . Saskatoon, Sask.        |

## Fourth Year—Class of 1915.

- Adams, H. R. . . . . Burlington, Ont.  
 Allison, G. . . . . Picton, Ont.  
 Armour, S. R. . . . . Campbellford, Ont.  
 Baillie, W. H. T. . . . . Toronto, Ont.  
 Ball, R. . . . . Toronto, Ont.  
 Barnett, J. D. H. W.  
     St. Mary's, Ont.  
 Bean, J. A. . . . . Regina, Sask.  
 Bell, A. M. . . . . Merrickville, Ont.  
 Berry, E. G. . . . . Toronto, Ont.  
 Betzner, N. E. . . . . Copetown, Ont.  
 Black, H. . . . . Stroud, Ont.  
 Bond, R. A. . . . . Toronto, Ont.  
 Boyd, J. R. . . . . Meaford, Ont.  
 Broad, C. O. . . . . Toronto, Ont.  
 Buttle, W. W. . . . . Pastime, Ont.  
 Cameron, W. A. . . . . Regina, Sask.  
 Campbell, W. R. . . . . Toronto, Ont.  
 Carpenter, T. A. . . . . Port Dover, Ont.  
 Carr, L. A. . . . . Hamilton, Ont.  
 Cates, H. A. . . . . Toronto, Ont.  
 Cathcart, W. A. . . . . Courtright, Ont.  
 Clement, F. W. . . . . Deseronto, Ont.  
 Clouse, E. B. . . . . Toronto, Ont.  
 Coatsworth, R. C. . . . . Toronto, Ont.  
 Collver, Miss B. L.  
     Bloomsburg, Ont.  
 Cosbie, W. G. . . . . Toronto, Ont.  
 Cotton, J. H. . . . . Toronto, Ont.  
 Courtenay, H. D. . . . . Ottawa, Ont.  
 Coutts, E. D. . . . . Toronto, Ont.  
 Cowan, R. D. . . . . Galt, Ont.  
 Crows, T. H. . . . . Berlin, Ont.  
 Crompton, C. R. B. . . . . Brantford, Ont.  
 Cunningham, J. G.  
     Moose Jaw, Sask.  
 Dale, G. M. . . . . St. Thomas, Ont.  
 Daly, J. . . . . Iona, P.E.I.  
 Duncan, J. H. . . . . Toronto, Ont.  
 Evans, W. L. . . . . Regina, Sask.  
 Fallis, L. C. . . . . Toronto, Ont.  
 Fauman, D. H. . . . . Rochester, N.Y.  
 Ferrier, G. J. . . . . Mimico, Ont.  
 Foote, W. S. . . . . Rosseau, Ont.  
 Fraser, D. T. . . . . York Mills, Ont.  
 Fraser, R. H. . . . . Chatham, Ont.  
 Gamey, L. R. . . . . Gore Bay, Ont.  
 Gillrie, F. R. . . . . Hamilton, Ont.  
 Gocher, T. E. P. . . . . Seattle, Wash.  
 Gordon, Miss E. H. . . . . Toronto, Ont.  
 Gorman, M. E. . . . . Oakville, Ont.  
 Graham, P. V. . . . . Uxbridge, Ont.  
 Guy, D. H. . . . . Maxwell, Ont.  
 Haney, W. C. . . . . Toronto, Ont.  
 Hanley, J. B. . . . . Midland, Ont.  
 Harris, R. I. . . . . Toronto, Ont.  
 Hayes, J. W. . . . . Peterborough, Ont.  
 Hazlewood, H. C. P. . . . . Toronto, Ont.  
 Hearn, P. . . . . Toronto, Ont.  
 Helliwell, M. R. . . . . Toronto, Ont.  
 Hodge, W. R. . . . . London, Ont.  
 Holmes, A. B. . . . . Toronto, Ont.  
 Howitt, J. R. . . . . Hamilton, Ont.  
 Jeffrey, E. S. . . . . Toronto, Ont.  
 Joyce, H. G. . . . . Bronte, Ont.  
 Kennedy, W. T. . . . . Agincourt, Ont.  
 Kinsey, H. I. . . . . Chatham, Ont.  
 Kirkham, F. R. . . . . Toronto, Ont.  
 Lamont, G. A. . . . . Guelph, Ont.  
 Lang, D. E. . . . . Toronto, Ont.  
 Letts, F. L. . . . . Lambeth, Ont.  
 Ley, A. G. . . . . Markham, Ont.  
 Livingston, G. C. . . . . Tottenham, Ont.  
 Loree, G. R. . . . . Toronto, Ont.  
 Lyon, L. B.  
     St. Ann's Bay, Jamaica.  
 Marlow, F. C.  
     Nestleton Station, Ont.  
 Martin, H. C. . . . . Hamilton, Ont.  
 Martyn, W. M. . . . . North Bay, Ont.  
 Mitchell, H. K. . . . . Port Arthur, Ont.  
 Moffatt, A. B. . . . . Toronto, Ont.  
 Moon, A. A. . . . . Cottam, Ont.  
 McCallum, A. . . . . Toronto, Ont.  
 McGanity, A. J. . . . . Hamilton, Ont.  
 McIntyre, G. C. . . . . Paisley, Ont.  
 McKeown, J. . . . . North Bay, Ont.  
 McLaren, W. R. . . . . Logerath, Ont.  
 McLarty, G. A. . . . . St. Thomas, Ont.  
 McLean, W. J. . . . . Blind River, Ont.  
 McMullen, D. . . . . Oil City, Ont.  
 Macneil, G. W. . . . . Owen Sound, Ont.  
 McVicker, E. H. . . . . Toronto, Ont.  
 Naylor, R. W. . . . . Toronto, Ont.  
 Newman, W. R. . . . . Toronto, Ont.  
 O'Gorman, V. K. . . . . Renfrew, Ont.  
 O'Sullivan, P. M. . . . . Toronto, Ont.

Paul, R. . . . .	Sebringville, Ont.	Storey, V. H. . . . .	Port Hope, Ont.
Riddell, A. R. . . . .	Toronto, Ont.	Storms, T. H. D. . . . .	Hamilton, Ont.
Ross, J. W. . . . .	Toronto, Ont.	Sutherland, F. H. . . . .	Toronto, Ont.
Routley, T. C. . . . .	Toronto, Ont.	Van Wyck, H. B. . . . .	Chatham, Ont.
Simpson, T. J. . . . .	Waldemar, Ont.	Walker, S. A. . . . .	Toronto, Ont.
Smith, Miss H. M. . . . .	Bombay, India.	Walsh, S. Y. . . . .	Springville, Ont.
Smith, H. R. . . . .	Toronto, Ont.	Watt, G. M. . . . .	Brantford, Ont.
Stark, W. B. . . . .	Toronto, Ont.	Wilson, C. E. . . . .	St. Mary's, Ont.
Stirrett, E. Z. . . . .	Toronto, Ont.	Winkler, W. N. . . . .	Toronto, Ont.
Stock, V. F. . . . .	Tavistock, Ont.	Wishart, D. E. S. . . . .	Toronto, Ont.

### Fifth Year—Class of 1914.

Anglin, G. C. . . . .	Cork, Ireland.	Graham, T. F. . . . .	Brantford, Ont.
Ballantyne, C. C. . . . .	Toronto, Ont.	Guyatt, B. L. . . . .	Binbrook, Ont.
Bastedo, A. F. . . . .	Bracebridge, Ont.	Hamilton, W. . . . .	Toronto, Ont.
Beaven, J. R. . . . .	Portage La Prairie, Man.	Hartry, R. E. . . . .	Seaforth, Ont.
Binkley, G. E. . . . .	Hamilton, Ont.	Hewitt, S. R. D. . . . .	Toronto, Ont.
Bond, J. E. . . . .	Toronto, Ont.	Horkins, R. . . . .	Toronto, Ont.
Bremner, J. M. . . . .	Camilla, Ont.	Humphrey, J. N. . . . .	Arkwright, Ont.
Brooke, R. J. W. . . . .	Georgetown, Ont.	Jeffs, H. B. . . . .	Toronto, Ont.
Brown, H. E. . . . .	Peterborough, Ont.	Knox, J. E. . . . .	Toronto, Ont.
Burnham, H. H. . . . .	Toronto, Ont.	Little, O. J. S. . . . .	Seaforth, Ont.
Butler, A. J. . . . .	Toronto, Ont.	Little, W. T. . . . .	Owen Sound, Ont.
Caldwell, G. L. . . . .	Shanty Bay, Ont.	Lowrey, B. D. . . . .	Toronto, Ont.
Cameron, K. W. . . . .	Toronto, Ont.	Mack, F. G. . . . .	Halifax, N.S.
Cardwell, W. A. . . . .	Toronto, Ont.	Macklin, C. C. . . . .	Toronto, Ont.
Clarke, H. . . . .	Toronto, Ont.	Martin, H. S. . . . .	Hamilton, Ont.
Clifford, E. J. . . . .	Toronto, Ont.	Maynard, J. C. . . . .	Stratford, Ont.
Coleman, R. E. . . . .	Toronto, Ont.	Moodie, Miss L. I. F.,	Edmonton, Alta.
Conn, H. R. . . . .	Thornbury, Ont.	McCorvie, J. E. . . . .	Chatham, Ont.
Cook, L. H. . . . .	Toronto, Ont.	McIntosh, W. V. . . . .	Windsor, Ont.
Coutts, R. . . . .	Toronto, Ont.	Macintyre, H. R. . . . .	Kincardine, Ont.
Cowling, Miss E. M. . . . .	Turner, Sask.	McKay, H. A. . . . .	Salisbury, Ont.
Crane, R. E. . . . .	Toronto, Ont.	McKenzie, K. G. . . . .	Monkton, Ont.
Cross, W. W. . . . .	Nantyr, Ont.	MacKenzie, R. D. . . . .	Toronto, Ont.
Davis, F. G. . . . .	Ivy, Ont.	McKenzie, W. W. . . . .	Toronto, Ont.
Day, O. J. . . . .	Orillia, Ont.	McKibbin, A. E. . . . .	Chelsea, P.Q.
Detweiler, H. K. . . . .	Berlin, Ont.	McLean, W. J. . . . .	Belgrave, Ont.
Drake, T. G. H. . . . .	North Bay, Ont.	McQuade, E. A. . . . .	Toronto, Ont.
Duck, J. A. . . . .	Toronto, Ont.	McQuay, J. F. . . . .	Toronto, Ont.
Dure, F. M. . . . .	Uxbridge, Ont.	Newell, C. . . . .	Milton, Ont.
Eberhart, F. L. . . . .	Little Current, Ont.	Palmer, L. C. . . . .	Toronto, Ont.
Flock, G. M. . . . .	Burlington, Ont.	Parker, A. A. . . . .	Humber Bay, Ont.
Foulds, G. S. . . . .	Toronto, Ont.	Patterson, M. H. . . . .	Chatham, Ont.
Galbraith, C. T. . . . .	Vulcan, Alta.		
Gardiner, W. J. . . . .	Mount Forest, Ont.		
Gliddon, G. C. . . . .	Union, Ont.		



Quick, D. A. ....	Harrow, Ont.	Struthers, R. G. ....	Galt, Ont.
Reeds, W. R. ....	Reaboro, Ont.	Sutton, H. C. ....	Cooksville, Ont.
Risdon, E. F. ....	Toronto, Ont.	Syer, E. C. ....	Pontypool, Ont.
Ross, D. E. ....	Clinton, Ont.		
Sinclair, W. E. ....	Meaford, Ont.	Taylor, A. ....	Lynedoch, Ont.
Slater, R. F. ....	St. Mary's, Ont.	Thomson, M. G. ....	Toronto, Ont.
Smith, R. P. ....	Dundas, Ont.	Tyrer, W. L. ....	Barrie, Ont.
Smith, R. S. ....	Hamilton, Ont.		
Speers, Miss A. B.	Brandon, Man.	Watson, W. V. ....	Toronto, Ont.
Stephen, E. H. ....	Meaford, Ont.	Wilson, R. R. ....	Toronto, Ont.
Stewart, J. M. ....	Halifax, N.S.	Wolverton, H. A. ....	Nelson, B.C.
		Woods, A. C. ....	Toronto, Ont.
		Wynne, C. S. ....	Watford, Ont.

### Dental Students,

Aljoe, R. H. ....	Durham, Ont.	Kenney, E. S. J.	
Anderson, R. M.	Bracebridge, Ont.		South Mountain, Ont.
Arnott, H. C. ....	Oshawa, Ont.	Kinzie, D. L. ....	Galt, Ont.
Berry, E. G. ....	Toronto, Ont.	Leggatt, W. C. ....	Newboro, Ont.
Bier, E. R. ....	New Hamburg, Ont.	Livett, J. C. ....	Toronto, Ont.
Boyd, D. M. ....	Creemore, Ont.	Lymburner, W. C.	Smithville, Ont.
Boyd, W. E. ....	Creemore, Ont.		
Bracken, B. M. ....	Orangeville, Ont.		
Brown, J. D. ....	St. Thomas, Ont.	McBride, E. S. ....	Smith's Falls, Ont.
		McCartney, C. F. ....	Toronto, Ont.
Campbell, T. D. ....	Dutton, Ont.	McDonell, H. G.	Wallacetown, Ont.
Canning, F. W. ....	Toronto, Ont.	McLaurin, L. D.	Vankleek Hill, Ont.
Clark, E. H. ....	Baldur, Man.	McLenaghan, N. B.	
Coates, J. W. ....	Avening, Ont.		Portage La Prairie, Man.
Conway, H. R. ....	Hespeler, Ont.	McMillan, G. R. ....	Toronto, Ont.
Craig, J. J. ....	Ridgeville, Man.		
Crockett, J. R. ....	Glen Valley, B.C.	Mills, R. H. ....	Bruce Mines, Ont.
		Musgrove, R. G. B.	
Davidowich, H. ....	Toronto, Ont.		Stonewall, Man.
Dores, J. E. E. ....	Niagara Falls, Ont.		
Eaid, B. E. ....	Simcoe, Ont.	Perlman, S. ....	Toronto, Ont.
		Pilkey, G. ....	Toronto, Ont.
Garvin, F. G. ....	Melville, Sask.	Plunkett, J. A. ....	Aylmer East, Que.
Gibson, G. F. ....	Campbellford, Ont.		
Godfrey, R. J. ....	Elora, Ont.	Reid, J. H. ....	Toronto, Ont.
Grant, C. L. ....	Durham, Ont.		
		Scott, H. ....	Elmvale, Ont.
Halladay, G. B. ....	Athens, Ont.	Siegel, D. I. ....	Toronto, Ont.
Harriman, L. E.	Owen Sound, Ont.	Slater, W. Jr. ....	Galt, Ont.
Holmes, E. W. ....	Toronto, Ont.	Smith, H. L. ....	Merlin, Ont.
Holmes, W. T. ....	Orangeville, Ont.	Smith, L. S. ....	Galt, Ont.
Holt, T. F. ....	Medicine Hat, Alta.	Spofford, F. ....	Guelph, Ont.
Hughes, S. J. ....	Toronto, Ont.	Steele, A. C. ....	Fergus, Ont.
Humphrey, F. E. ....	Troy, Ont.		
		Taylor, W. J. ....	Southampton, Ont.
James, H. ....	Oshawa, Ont.		
Jamieson, E. F. ....	Violet Hill, Ont.	Wing, R. H. ....	Berlin, Ont.
Kennedy, J. A. ....	Stratford, Ont.		



**Occasional Students.**

Berman, Miss Sarah, M.D., Toronto.	McTavish, D. A. . . . . Toronto.
Ferguson, H. E. . . . . Toronto.	Pugh, E. C. . . . . Toronto.
Ferguson, J. Young, B.A., M.D., C.M. . . . . Taihoku, Formosa.	Thompson, Hamlet D., M.D., Toronto.
Fleming, V. P. . . . . Toronto.	Wright, C. Stewart, M.B. . Toronto.
McCullough, J. W. S., M.D., C.M., Toronto.	Williams, P. A. . . . . Bethany.

**Summary.**

First Year Students . . . . .	135
Second Year Students . . . . .	100
Third Year Students . . . . .	118
Fourth Year Students . . . . .	112
Fifth Year Students . . . . .	89
Dental Students . . . . .	59
Occasional Students . . . . .	10
Total . . . . .	623

## FACULTY OF APPLIED SCIENCE AND ENGINEERING

## REGISTER OF STUDENTS, 1913-14.

## First Year.

1 Aggett, W. H. .... Toronto.	1 Eardley-Wilmot, F. L.
7 Andrew, W. B. .... Chatham.	Westward Ho! Devon, Eng.
1 Attwood, W. S. .... Hamilton.	7 Eyre, R. T. .... Toronto.
1 Ball, O. V. .... Toronto.	7 Ferrier, D. W. .... Toronto.
7 Ballinger, J. G. .... Streetsville.	3*Firstbrook, J. H. .... Toronto.
4*Banigan, J. .... Toronto.	1 Firstbrook, W. G. .... Toronto.
7 Barbour, R. A. .... London.	1 Fraser, J. A. .... Ballymote.
7*Bauer, W. R. .... Waterloo.	2*Gilley, E. R.
3 Bell, E. .... Seaforth.	New Westminster, B.C.
6 Belton, J. R. .... Fredericton, N.B.	1*Gilley, J. R.
1*Berry, A. E. .... Berryland.	New Westminster, B.C.
3 Bingham, S. B. ....	4 Gibson, F. R. .... Toronto.
1 Bishop, C. A. .... Toronto.	1 Glover, T. S. .... Toronto.
3 Bishop, J. M. .... Toronto.	1 Graham, D. S. .... Inglewood.
1 Bishop, W. A. .... Owen Sound.	7 Gram, J. I. .... Weston.
3 Booth, G. E. .... Toronto.	4*Haldenby, E. W. .... Toronto.
1 Bothwell, R. S. C. .... Toronto.	7*Hanly, A. F. .... Almonte.
3 Breckenridge, B. E. .... Hamilton.	3 Harris, A. B. .... Toronto.
1 Brooks, W. J. .... Toronto.	7 Harrop, C. E. .... Garnet.
7 Bryans, F. M. .... Toronto.	1*Hawkey, R. R. .... Grimsby.
7*Bumstead, S. W. .... Owen Sound.	3 Henderson, M. G. .... Tara.
1 Burn, G. A. H. .... Janetville.	7 Hewson, C. .... Port Hope.
7 Burton, C. E. .... Kirkton.	1 Holland, U. C. .... London.
7 Burwash, N. .... New Liskeard.	6 Honeywell, W. B. .... Tyrone.
7 Byres, E. S. .... Chatham.	2 Howes, E. A. .... Harriston.
1*Carmichael, A. H. .... Toronto.	7*Huestis, R. D. .... Toronto.
7 Catherwood, C. R. .... Owen Sound.	1 Hughes, C. A. .... Mimico Beach.
1*Chamberlain, K. H. .... Ottawa.	4 Hume, A. G. .... Toronto.
1 Christie, F. C. .... Yorkton, Sask.	1 Hunter, W. H. .... Toronto.
7 Colleran, J. C. .... Port Arthur.	1 Hurlbutt, R. W. .... Mitchell.
1 Coon, H. F. .... Hamilton.	7 Hutcheson, G. F. .... Huntsville.
1 Corman, E. H. .... Hamilton.	3 Ives, V. E. .... Colborne.
7 Creamer, P. S. .... Dawson, Y.T.	1 Jamieson, K. W. .... Berlin.
1 Crysler, R. A. .... Toronto.	1 Johnston, E. W. .... Harriston.
1 Dafoe, E. R. .... Napanee.	1 Jones, R. E. .... Meyersburg.
1 Dale, W. P. .... Brampton.	1 Kay, W. R. .... Toronto.
1 Darch, F. C. .... London.	6 Knight, A. G. .... Toronto.
5 Dickson, J. V. .... Toronto.	5 Lawson, O. G. .... London.
3*Dobbin, H. O. .... Waterloo.	1*LeClair, W. J. .... Ottawa.
1 Dowling, H. L. .... Toronto.	1 Legate, H. J. .... Owen Sound.
7 Durbrow, P. A. .... Carswell.	1 Longworthy, H. L. Regina, Sask.
1 Dustan, E. B. .... Pictou, N.S.	1*Macdonald, J. A. .... Toronto.

\* Non-matriculated.

- 7\* Mackenzie, A. B. . . . . Toronto.  
 7 MacLaren, H. J. . . . . Brockville.  
 5\* Maclean, A. P. . . . . Toronto.  
 1 Manning, R. C. . . . . Hamilton.  
 1 Manzer, R. . . . . Medicine Hat, Alta.  
 4 Mathers, A. S. . . . . Chesley.  
 7 Mayberry, F. C. . . . . Stratford.  
 3 McCandlish, S. G. . . . . Hamilton.  
 2 McClelland, H. L. . . . . Cooksville.  
 1\* McClintock, G. A.,  
     Pt. Fortune, Que.  
 1 McEwen, G. A. . . . . Regina, Sask.  
 3 McIlhargey, P. E. . . . . Stratford.  
 7\* McKinley, F. A. . . . . Wyoming.  
 1 McLean, J. R. . . . . Palmerston.  
 1\* McMaster, W. S. . . . . Toronto.  
 1\* Mitchell, F. L. . . . . St. Kitts, B.W.I.  
 1\* Moorhouse, E. L.,  
     Medicine Hat, Alta.  
 7 Morgan, D. M. . . . . Streetsville.  
 7 Nichol, W. J. . . . . Dunnville.  
 1 Nicholson, H. R. . . . . Hamilton.  
 1 Nixon, W. H. . . . . Toronto.  
 1\* Norris, A. F. . . . . Toronto.  
 7 Offerhaus, W. A. R.,  
     Armstrong, B.C.  
 1\* Parr, H. A. . . . . Calgary, Alta.  
 1\* Pearson, G. P. . . . . Schomberg.  
 1\* Pool, C. L. . . . . Newport News, Va.  
 1 Proctor, W. D. . . . . Sarnia.  
 1 Purchas, C. M. G.,  
     Morant Bay, Jamaica, B.W.I.  
 7 Ratz, R. D. . . . . Elmira.  
 2 Richardson, C.A. . . . . Cleveland, O.  
 1 Ryan, T. L. J. . . . . Brantford.  
 7 Secord, W. F. . . . . Port Robinson.  
 7 Scott, T. A. . . . . Walkerton.  
 2 Sharman, J. E. . . . . Oak Lake.  
 1 Shoebottom, L. R. . . . . London.  
 3 Sinclair, G. R. . . . . Belleville.  
 1 Sinclair, I. M. R. . . . . Toronto.  
 3 Snider, M. A. . . . . Waterloo.  
 1\* Sohn, G. H. . . . . Indianapolis, Ind.  
 1 Stevenson, C. W. G. . . . . Guelph.  
 1 Stephenson, G. E. . . . . Hills Green.  
 7\* Sutherland, W. F. B. . . . . Toronto.  
 1\* Taylor, R. E. . . . . So. Woodilee.  
 1 Thompson, B. . . . . Port Hope.  
 4 Thompson, C. C. . . . . Toronto.  
 1 Thomson, A. P. J. . . . . Toronto.  
 1 Tilston, C. E. . . . . Toronto.  
 3 Tyndale, C. E. . . . . Chatsworth.  
 7 Titus, O. W. . . . . Gore Bay.  
 7 Tufford, A. A. . . . . Hamilton.  
 7 Tuttle, H. A. . . . . Niagara Falls.  
 5 Tyrrell, E. J. . . . . Toronto.  
 3 Vaughan, O. D. . . . . Toronto.  
 1 Waddle, F. M. . . . . Brantford.  
 1 Wait, G. E. . . . . Ottawa.  
 7 Wallace, J. S. M. . . . . Galt.  
 7 Ward, J. W. . . . . Waterford.  
 1\* Warwick, R. S. . . . . Brussels.  
 4 Watson, H. R. . . . . Toronto.  
 1\* Webb, G. A. . . . . Toronto.  
 7 Webb, I. W. . . . . Toronto.  
 1 Whately, G. A. . . . . Thornbury.  
 1 Willmott, L. E. . . . . Toronto.  
 1 Wood, G. . . . . Kincardine.

### Second Year.

- 1 Allan, E. B. . . . . Toronto.  
 6 Anderson, C. C. . . . . Windsor.  
 7 Armstrong, R. K. . . . . Oakville.  
 1 Armstrong, T. E.,  
     Kleczkowski, Sask.  
 7 Babcock, H. A. . . . . Toronto.  
 7 Ball, F. C. W. . . . . London.  
 1 Barnes, L. F. . . . . Hamilton.  
 7 Booth, F. W. . . . . Toronto.  
 6 Boyd, D. . . . . Toronto.  
 5 Birrell, W. G. . . . . Pinkerton.  
 3 Breuls, H. E. . . . . Toronto.  
 1 Brown, R. R. . . . . Nelson, B.C.  
 1 Brown, H. R. . . . .  
 5 Brown, N. B. . . . . Toronto.  
 1 Cannon, F. J. . . . . Toronto.  
 7 Chapman, J. R. . . . . Galt.  
 7 Cheney, S. K. . . . . Vankleek Hill.  
 1 Crosby, E. . . . . Toronto.  
 7 Cross, R. A. . . . . Hamilton.  
 7 Cumming, K. N. . . . . Eberts.  
 3 Cunningham, J. N.,  
     Moose Jaw, Sask.  
 7 Cunningham, L. L.,  
     Carlyle, Sask.  
 1 Dale, R. S. . . . . London.  
 7 Dandeno, L. G. . . . . Hespeler.  
 7 Daniel, T. A. . . . . Ingersoll.  
 1 Dashwood, G. R. . . . . Midland.  
 3 Delisle, L. . . . . Chicoutimi, Que.  
 1 Doherty, C. A. . . . . Durham.  
 1 Downie, R. W. . . . . Melita, Man.  
 1 Eastwood, J. H. . . . . Peterboro.  
 1 Edmonds, C. W. . . . . Simcoe.  
 7 Fallis, M. P. . . . . Cadmus.  
 7 Flegg, R. L. . . . . Smiths Falls.

\* Non-matriculated.

- 7 Fleming, A. . . . . Toronto.  
 7 Fraser, R. A. . . . . Georgetown.  
 1 Gaboury, L. F. . . . . Toronto.  
 1 Gage, C. E. . . . . Hamilton.  
 1 Gardner, D. B. . . . . Toronto.  
 7 Grasett, H. A. M. . . . . Barrie.  
 1 Greatrex, W. K. . . . . Toronto.  
 7 Gurnett, E. G. . . . . Owen Sound.  
 1 Hagarty, D. G. . . . . Toronto.  
 1 Hagedorn, G. C. . . . . Berlin.  
 2 Hanmer, G. . . . . Toronto.  
 2 Hare, R. M. . . . . Toronto.  
 1 Harron, L. W. . . . . Toronto.  
 1 Hoag, C. K. . . . . Woodstock.  
 4 Hoidge, R. T. C. . . . . Toronto.  
 7 Hubbert, S. J. . . . . Toronto.  
 1 Hughes, B. H., St. Merryn, Eng.  
 8 Hugill, O. H. . . . . Sault Ste. Marie.  
 4 Husband, L. . . . . Hamilton.  
 1 Ingersoll, L. H. . . . . Woodstock.  
 1 Jackson, K. B. . . . . Toronto.  
 7 Johnston, M. . . . . Clayton.  
 3 Keefer, M. W. . . . . Toronto.  
 7 Kelleher, J. . . . . Toronto.  
 4 Kidd, W. S. . . . . Burrets Rapids.  
 7 King, G. F. . . . . Simcoe.  
 1 Kirby, J. R. . . . . Toronto.  
 1 Kerby, R. W. . . . . Toronto.  
 3 Kirn, R. W. . . . . Peterboro.  
 7 Klingensmith, C. R. . . . . Toronto.  
 6 Krug, S. J. . . . . Chesley.  
 1 Lee, L. A. C. . . . . Toronto.  
 7 Levesque, L. . . . . Chicoutimi, Que.  
 7 Little, H. B. . . . . London.  
 2 Macdonald, C. E. . . . . Toronto.  
 3 Macdonald, R. A. . . . . Stratford.  
 2 Macpherson, C. K. . . . . Goderich.  
 7 Manning, T. R. . . . . Toronto.  
 1 Margison, O. . . . . Victoria, B.C.  
 4 Marani, G. H. . . . . Toronto.  
 1 Matthews, F. J. . . . . London.  
 2 McCrodan, B. A. . . . . Belleville.  
 1 McGinn, F. . . . . Toronto.  
 4 McLellan, T. W. . . . . Harriston.  
 1 McPherson, F. T.,  
     Saskatoon, Sask.  
 1 Mendizabal, A. R.,  
     Oruro, Bolivia, S.A.  
 3 Merry, F. S. . . . . Stratford.  
 1 Mitchell, W. B. . . . . London.  
 3 Newcombe, J. C. . . . . Toronto.  
 2 Norton, F. W. . . . . Evanston, Ill.  
 1 Norwich, H. B. . . . . Toronto.  
 7 Nott, G. E. . . . . London.  
 1 O'Callaghan, E. A. . . . . Cornwall.  
 6 Oliver, C. E. . . . . East Delta, B.C.  
 6 O'Reilly, W. H. . . . . Toronto.  
 3 Ormsby, J. A. N. . . . . Toronto.  
 7 Panter, J. S. . . . . Belleville.  
 7 Park, R. T. . . . . Peterboro.  
 7 Paterson, W. B. . . . . Arva.  
 1 Pfrimmer, V. R. . . . . Stratford.  
 1 Pringle, J. E. . . . . Hamilton.  
 3 Pym, A. F. . . . . Essex.  
 7 Reed, H. . . . . Toronto.  
 1 Ritchie, W. W. . . . . Toronto.  
 1 Rose, H. C. . . . . Guelph.  
 1 Ross, S. R. . . . . Toronto.  
 3 Russell, J. P. . . . . Toronto.  
 4 Schwartz, G. B. . . . . Toronto.  
 1 Scott, W. B. . . . . Toronto.  
 1 Seaborne, R. L. . . . . La Tuque, Que.  
 1 Sievwright, R. L. . . . . Windsor.  
 7 Skinner, J. L. . . . . Toronto.  
 7 Smelser, W. A. . . . . Hamilton.  
 1 Smith, E. E. . . . . Sault Ste. Marie.  
 1 Smith, H. S. . . . . Saskatoon, Sask.  
 1 Smithson, E. W. . . . . London.  
 1 Smythe, C. . . . . Toronto.  
 1 Snow, G. B. . . . . Toronto.  
 1 Speirs, R. M. . . . . Toronto.  
 1 Stark, W. H. . . . . Toronto.  
 4 Stevens, P. L. . . . . Toronto.  
 1 Storms, F. S. . . . . Toronto.  
 1 Stratford, G. S. . . . . Brantford.  
 1 Sureda, J. A. . . . . Toronto.  
 4 Swinnerton, F. A. R. W.,  
     Toronto.  
 1 Taylor, M. S. . . . . Regina, Sask.  
 7 Thomas, A. M. . . . . Toronto.  
 7 Tobin, K. E. . . . . Woodstock.  
 1 Tremayne, J. E. . . . . Sutton West.  
 7 Tudhope, R. . . . . Norwood.  
 4 Tyrewhitt, R. . . . . Toronto.  
 2 Wallace, H. D. . . . . Toronto.  
 5 Ward, F. W. . . . . Toronto.  
 1 Ward, R. C. . . . . Toronto.  
 3 Washington, H. A. . . . . Toronto.  
 4 Waters, D. M. . . . . Belleville.  
 3 Watson, J. M. . . . . Woodstock.  
 7 Wells, A. R. . . . . Blyth.  
 7 Weppler, H. S. . . . . Hanover.  
 1 Whaley, A. B. . . . . Toronto.  
 1 Wheelock, C. H. . . . . Orangeville.  
 7 Widdicombe, A. E.,  
     St. Catharines.  
 1 Williams, R. E. . . . . Toronto.  
 1 Wilson, F. C. . . . . Kerrwood.  
 7 Wilson, J. S. . . . . Kenora.  
 7 Wilson, R. H. . . . . Markham.  
 4 Wilson, W. S. . . . . Hanover.  
 3 Youell, L. L. . . . . Aylmer.  
 2 Young, J. F. . . . . North Bay.



## Third Year.

- |                                      |  |
|--------------------------------------|--|
| 1 Adlard, L. S. .... Toronto.        | 1 Geale, C. N. .... Peterboro.             |
| 2 Allan, W. N. .... Nelson, B.C.     | 6 Glass, L. G. .... London.                |
| 1 Anderson, A. C. .... Toronto.      | 2 Glazier, M. B. .... Brockville.          |
| 1 Arksey, G. A. .... Toronto.        | 1 Gooderham, G. A. .... Toronto.           |
| 2 Arthur, R. M. .... Sudbury.        | 7 Gould, W. H. R. .... Uxbridge.           |
| 1 Austin, F. D. .... Peterboro.      | 4 Graham, T. S. .... Toronto.              |
| 7 Ball, W. V. .... Toronto.          | 1 Grange, E. R. .... Toronto.              |
| 7 Banbury, T. R. .... Ingersoll.     | 1 Gray, E. D. .... Vancouver, B.C.         |
| 7 Beacock, V. A. .... Toronto.       | 3 Gray, J. .... Victoria, B.C.             |
| 1 Bennett P. .... Calgary, Alta.     | 1 Gray, G. S. .... Meaford.                |
| 1 Beswick, R. C. .... Uxbridge.      | 7 Griffiths, G. E. .... Thorold.           |
| 7 Birrell, A. L. .... Toronto.       | 1 Gurofsky, M. .... Toronto.               |
| 1 Black, A. P. .... Toronto.         | 2 Haas, M. S. .... Toronto.                |
| 1 Blackstock, G. G. .... Toronto.    | 2 Hall, W. T. .... Toronto.                |
| 7 Bonus, W. H. .... Peterboro.       | 2 Hanlon, J. E. .... Arkell.               |
| 6 Breithaupt, J. E. .... Berlin.     | 1 Harris, R. W. .... Cobourg.              |
| 1 Brouse, E. D. .... Toronto.        | 1 Hastings, C. E. .... Toronto.            |
| 1 Brown, L. R. .... Toronto.         | 1 Hayward, C. .... Toronto.                |
| 1 Buchanan, F. M. .... Blenheim.     | 4 Heaton, H. A. .... Toronto.              |
| 7 Budd, H. C. .... Palmyra.          | 2 Higgins, L. T. .... Toronto.             |
| 4 Burness, K. C. .... Toronto.       | 1 Hogarth, C. E. .... Hamilton.            |
| 4 Burden, H. J. .... Toronto.        | 7 Hopkins, H. R. .... Burlington.          |
| 2 Campbell, P. G. C. .... Peterboro. | 7 Ireland, T. P. .... Hamilton.            |
| 2 Carmichael, F. N. D. .... Toronto. | 7 Ironside, G. .... London.                |
| 7 Carswell, J. M. .... Toronto.      | 1 Jackson, C. W. H. .... Co. oconk.        |
| 4 Catto, R. W. .... Toronto.         | 7 Jefferson, K. A. .... Arcola, Sask.      |
| 7 Cavers, J. P. .... Milford Bay.    | 1 Johnston, G. W. F.,<br>Lethbridge, Alta. |
| 7 Chandler, F. H. .... Stratford.    | 7 Jones, C. M. .... Toronto.               |
| 1 Cockburn, R. M. .... Toronto.      | 2 Jones, R. D. .... Toronto.               |
| 7 Code, W. W. .... Toronto.          | 1 Jupp, E. H. .... Orillia.                |
| 1 Cook, J. D. .... Toronto.          | 7 Karn, H. C. .... Woodstock.              |
| 1 Cotton, C. P. .... Toronto.        | 7 Keys, C. R. .... Newark, N.J.            |
| 1 Crealock, A. B. .... Toronto.      | 5 Kohl, H. .... Toronto.                   |
| 1 DaCosta, W. R. C. .... Toronto.    | 1 Laidlaw, R. E. .... Durham.              |
| 1 Daniel, N. H. .... Port Hope.      | 1 Lamb, G. J. .... Walkerton.              |
| 3 Davey, C. G. .... London.          | 7 Lawrence, G. W. .... Pt. Dalhousie.      |
| 4 Davidson, J. J. .... Toronto.      | 3 Lloyd, R. H. .... Wingham.               |
| 7 Davidson, G. P. .... Toronto.      | 1 Lockhart, W. E. .... Newcastle.          |
| 7 Dean, W. A. .... Toronto.          | 1 Longworthy, W. E.,<br>Regina, Sask.      |
| 1 Deverall, E. V. .... Toronto.      | 1 Lount, C. T. .... Regina, Sask.          |
| 4 Denison, M. .... Toronto.          | 1 Lye, R. G. .... Toronto.                 |
| 7 Dibblee, J. .... Toronto.          | 2 Macdonell, I. M. .... Toronto.           |
| 1 Dickson, W. L. .... Toronto.       | 1 Macpherson, H. E. .... St. Thomas.       |
| 7 Dobbin, C. W. .... Waterloo.       | 1 Magann, G. L. .... Toronto.              |
| 1 Downey, G. A. .... Orillia.        | 7 Martin, E. T. .... Waddington, N.Y.      |
| 4 Edwards, G. R. .... Toronto.       | 3 Mason, F. H. .... Uxbridge.              |
| 7 Elliot, R. V. .... Norwich.        | 1 McCaffrey, W. R. .... Toronto.           |
| 2 Emmerson, E. R. .... Port Arthur.  | 1 McCort, C. R. .... Port Arthur.          |
| 1 Evans, A. C. .... Oakville.        | 1 McDonald, J. P. .... Brantford.          |
| 1 Falconer, H. S. .... Shelburne.    | 1 McDonald, K. D.,<br>Vancouver, B.C.      |
| 1 Ford, J. W. H. .... London.        | 3 McGie, W. R. .... Belleville.            |
| 1 Fraser, W. R. .... Brantford.      | 1 McGugan, D. F. .... Mt. Brydges.         |
| 1 French, W. G. .... Toronto.        |  |
| 1 Fulton, W. J. .... Toronto.        |  |
| 1 Galbraith, R. D. .... Toronto.     |  |



- 1 McKague, E. V. . . . . Toronto.  
 1 Meitz, W. H. . . . . Pembroke.  
 3 Meyer, W. R.,  
     Redwood City, Cal., U.S.A.  
 2 Mills, F. L. . . . . Toronto.  
 1 Mitchell, G. . . . . Hamilton.  
 1 Mogan, J. T. . . . . Toronto.  
 7 Monteith, E. M. . . . . Toronto.  
 4 Morris, A. . . . . Toronto.  
 1 Morris, B. M. . . . . Pembroke.  
 5 Morris, W. . . . . Warwick.  
 2 Muir, J. M. . . . . Toronto.  
 1 Murphy, D. E.,  
     New Westminster, B.C.  
 1 Neilson, M. A. . . . . Toronto.  
 1 Nicklin, H. S. . . . . Acton.  
 1 O'Connor, E. B. . . . . Toronto.  
 3 Payne, A. N. . . . . Toronto.  
 1 Pearce, P. L. . . . . Yorkton, Sask.  
 1 Peck, H. M. . . . . Barrie.  
 1 Peterkin, S. M. . . . . Toronto.  
 1 Porter, C. F. . . . . Windsor.  
 1 Porter, J. E. . . . . Wingham.  
 3 Purdy, W. F. P. . . . . Wardsville.  
 1 Raley, W. E. . . . . Lethbridge.  
 6 Ramsay, H. . . . . Owen Sound.  
 1 Rance, C. C. . . . . Toronto.  
 1 Rankin, G. . . . . North Bay.  
 1 Redman, W. B. . . . . Birch Cliff.  
 3 Reid, F. G. . . . . Belleville.  
 1 Richardson, A. A. . . . . Peterboro.  
 7 Richmond, J. . . . . Smiths' Falls.  
 3 Robertson, A. S. . . . . Walkerton.  
 1 Rose, J. T. . . . . Toronto.  
 7 Ross, A. C. . . . . Toronto.  
 2 Ross, J. . . . . Toronto.  
 1 Rowe, H. M. . . . . Norwich.  
 7 Russell, W. E. . . . . Waubausheene.  
 4 Rutter, G. W. . . . . Birch Cliff.  
 7 Ryan, W. M. . . . . Owen Sound.  
 7 Savage, E. W. . . . . Navan.  
 7 Scott, A. G. . . . . Smiths Falls.  
 1 Scott, E. H. . . . . Toronto.  
 1 Scott, R. G. . . . . Toronto.  
 7 Seymour, N. F. . . . . Essex.  
 1 Shaw, J. H. . . . . Toronto.  
 1 Sheehy, J. S. . . . . Peterboro.  
 3 Shier, W. G. . . . . Vancouver, B.C.  
 1 Simpson, C. N. . . . . Toronto.  
 3 Smith, C. A. . . . . Worthington.  
 3 Smyth, A. H. . . . . Strathroy.  
 7 Steel, W. A. . . . . Belleville.  
 1 Steven, R. A. . . . . Toronto.  
 2 Stitt, J. B. . . . . Haileybury.  
 3 Stone, J. D. . . . . Chatham.  
 1 Storms, D. H. . . . . Hamilton.  
 2 Stroud, J. E. C.,  
     Bridgetown, Barbados, B.W.I.  
 7 Suhler, A. N. . . . . Pt. Edward.  
 7 Taylor, A. N. . . . . Winchelsea.  
 3 Taylor, H. C. . . . . Victoria, B.C.  
 3 Tillson, G. D. . . . . Tillsonburg.  
 1 Tillson, L. B. . . . . Bracebridge.  
 1 Tom, J. A. . . . . Goderich.  
 5 Uffelmann, W. . . . . Waterloo.  
 1 Vance, J. A. . . . . New Hamburg.  
 1 Vezina, L. P. . . . . Chicoutimi, Que.  
 7 Ward, A. L. . . . . Niagara Falls.  
 5 Watson, L. T. . . . . Woodstock.  
 1 Weir, F. E. . . . . Burford.  
 1 West, C. W. . . . . Campbellford.  
 2 Wilcock, W. S. . . . . Flesherton.  
 1 Williams, J. N. . . . . Burlington.  
 1 Wilson, J. C. . . . . Wingham.  
 1 Wood, H. A. . . . . Toronto.

#### Fourth Year.

- 1 Abendana, E. M.,  
     Port Antonio, Jamaica, B.W.I.  
 1 Adsett, F. C. . . . . North Bay.  
 1 Alton, J. L. . . . . Lucknow.  
 2 Andrews, F. C. . . . . Hamilton.  
 7 Armer, C. E. . . . . Toronto.  
 2 Banks, H. R. . . . . Toronto.  
 1 Bedard, E. L. . . . . Courtright.  
 1 Bedard, H. J. . . . . Courtright.  
 1 Belcher, J. T. . . . . Toronto.  
 1 Bennett, S. G. . . . . Toronto.  
 1 Binns, P. V. . . . . Toronto.  
 1 Blyth, J. M. . . . . Orchard.  
 5 Bonham, A. R. . . . . Toronto.  
 1 Bower, J. H. W. . . . . Toronto.  
 3 Brown, H. H. . . . . Port Hope.  
 7 Brown, W. D. . . . . Owen Sound.  
 1 Campbell, D. H. . . . . Rodney.  
 7 Campbell, H. A. . . . . Toronto.  
 3 Campbell, H. M. . . . . St. Catherines.  
 1 Campbell, J. J. . . . . Galt.  
 6 Candee, C. N. . . . . Toronto.  
 2 Carlyle, R. T. . . . . Toronto.  
 2 Carter, J. M. . . . . Toronto.  
 2 Chambers, E. V. . . . . Woodstock.  
 1 Christie, R. M.,  
     Edmonton, Alta.  
 3 Clipsham, K. M. . . . . Toronto.  
 7 Corbould, C. E. B.,  
     New Westminster, B.C.  
 1 Crashley, J. W. . . . . Toronto.  
 3 Courtice, E. D. W. . . . . Clinton.

- 7 Crawford, A. W. .... Sarnia.  
 1 Cuthbertson, W. .... Perth.  
 1 Dalton, G. F. .... Toronto.  
 1 Dashwood, R. .... Midland.  
 1 Davidson, R. D. .... Alliston.  
 3 Delamere, R. D. .... Toronto.  
 1 Douglas, F. W. .... Toronto.  
 7 Edwards, H. C. .... Toronto.  
 3 Elliott, H. F. .... Norwood.  
 1 Elliott, J. A. .... Nelson, B.C.  
 2 Ellis, S. D. .... Victoria, B.C.  
 1 Eyres, H. E. .... Calgary, Alta.  
 1 Falls, O. M. .... Toronto.  
 7 Ferguson, D. G. .... St. Thomas.  
 1 Fleming, G. O. .... Toronto.  
 2 Fleming, J. S. .... Cobalt.  
 1 Foreman, J. L. .... Collingwood.  
 7 Franklin, H. J. .... Toronto.  
 5 Frost, J. G. G. .... Tweed.  
 1 Fuller, C. H. R. .... Toronto.  
 7 Gill, E. I. .... Victoria Harbour.  
 2 Gill, J. R. .... Sudbury.  
 1 Gouinlock, R. W. .... Toronto.  
 7 Grierson, C. I.,  
     Strathcona, Alta.  
 2 Halford, D. S. .... Toronto.  
 3 Hall, W. H. .... Peterboro.  
 3 Hally, G. H. .... Toronto.  
 1 Hanna, J. J. .... Calgary, Alta.  
 1 Hawes, J. H. .... Orangeville.  
 1 Hayman, L. T. .... London.  
 1 Hogarth, B. B. .... Brandon, Man.  
 4 Hugli, E. E. H. .... Golden Lake.  
 1 Hustwitt, S. A. .... Toronto.  
 2 Hutchings, W. .... Toronto.  
 7 Jannati, A. S. .... Bombay, India.  
 1 Johnson, R. P. .... Toronto.  
 7 Kamman, J. I. .... Rochester, N.Y.  
 1 Kay, J. .... Toronto.  
 4 Keefer, N. G. .... Toronto.  
 3 Kerby, H. S. .... Calgary, Alta.  
 3 Kerr, J. A. .... Peterboro.  
 7 Kewin, G. E. .... Toronto.  
 1 Knight, J. A. .... Bala.  
 2 Lang, S. A. .... Toronto.  
 7 Latimer, C. W. .... Penticton, B.C.  
 1 Lindsay, R. E. .... Bolton.  
 7 Lorimer, N. H. .... Toronto.  
 5 Lye, O. G. .... Toronto.  
 2 Macdonald, W. A. .... Cobalt.  
 3 MacKendrick, B. .... Galt.  
 7 Mackenzie, A. M. .... Guelph.  
 2 Mackenzie, H. J. .... Woodstock.  
 1 MacLachlan, W. A. .... Guelph.  
 1 Macpherson, H. N., Regina, Sask.  
 3 MacQuarrie, A. H. .... Valetta.  
 7 Marshall, J. A. .... Ryckmans.  
 1 Marshall, J. A. P. .... London.  
 7 Matthews, R. G. .... Brantford.  
 3 Maxwell, H. W. .... St. Marys.  
 1 McDonald, R. C. .... Ripley.  
 1 McGarry, P. J. .... Merritton.  
 1 McGill, S. B. .... Toronto.  
 7 McLaren, D. L. .... Perth.  
 3 McQueen, P. H. .... Toronto.  
 1 Meadows, C. A. .... Toronto.  
 2 Meahan, P. W.,  
     Bathurst Village, N.B.  
 1 Mechin, F. C. .... Brougham.  
 1 Millar, W. G. .... Toronto.  
 1 Miller, A. S. .... Brighton.  
 6 Milligan, W. E. .... Toronto.  
 7 Mills, P. H. .... Toronto.  
 1 Mitchell, J. S. .... Lucknow.  
 1 Montague, J. R. .... Niagara Falls.  
 6 Morrison, D. .... Bowmanville.  
 1 Mullins, G. J. .... Toronto.  
 1 Muntz, E. P. .... Toronto.  
 7 Nicholson, C. L. .... Toronto.  
 1 Nicholson, J. B. .... Hamilton.  
 1 Noecker, C. .... Waterloo.  
 1 Owens, J. A. .... Toronto.  
 1 Parker, A. H. .... Toronto.  
 1 Patterson, R. G. .... St. Marys.  
 7 Peart, J. D. .... Freeman.  
 1 Pennington, C. W. .... Dundas.  
 1 Perry, C. V. .... Toronto.  
 5 Phillips, W. E. .... Toronto.  
 7 Philp, G. O. .... Port Hope.  
 7 Philp, W. M. .... Edmonton, Alta.  
 1 Raney, P. H. .... Toronto.  
 1 Rice, R. H. .... Toronto.  
 7 Robertson, A. S. .... Toronto.  
 4 Robertson, J. M. .... Toronto.  
 7 Rothwell, H. D. .... Gilford.  
 1 Rutherford, F. S. .... Bolton.  
 3 Scott, J. G. .... Toronto.  
 7 Servos, F. M.,  
     Niagara-on-the-Lake.  
 1 Sheppard, H. L. .... Coldwater.  
 1 Sheppard, N. E. D. .... Ottawa.  
 2 Shepley, J. G. .... Gordon.  
 1 Shupe, S. .... Attercliffe.  
 6 Sime, A. W. .... Toronto.  
 1 Simpson, B. N. .... Toronto.  
 1 Sinclair, C. E. .... Meaford.  
 1 Skaith, J. B. .... Toronto.  
 4 Skinner, W. C. .... Toronto.  
 5 Smith, G. E. .... Toronto.  
 1 Smith, H. M. .... Goderich.  
 2 Smyth, G. M. .... Merritton.  
 7 Standing, R. O. .... Inglewood.

7 Stoneman, E. C. R.....	Toronto.	1 VanDyke, F. T.....	Grimsby.
1 Strome, I. R.....	Brandon, Man.	3 Verity, M. F.....	Brantford.
1 Somers, N. L.....	Villa Nova.	1 Waddell, H. O.....	Port Hope.
3 Tackaberry, S. G.....	Toronto	1 Wagner, H. W.....	Toronto.
2 Taylor, J. S... Whitehorse, Y.T.		1 Wallace, H. D. M.....	Toronto.
1 Temes, C. N.....	Toronto.	1 Whitley, P. L.....	Corrie.
3 Tennent, E. H.....	London.	6 Wigle, A. E.....	Kingsville.
1 Tilston, J. A.....	Toronto.	7 Wigle, J. A.....	Kingsville.
1 Treloar, G. E.....	Toronto.	4 Wilson, A. C.....	Toronto.
7 Tull, W. S.....	Toronto.	1 Wilson, H. P.....	Toronto.
6 Twidale, E. A... Niagara Falls.		2 Young, R. W.....	Bothwell.

### Occasional.

Harper, C. J.....	Toronto.
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### Students of other Faculties Taking Instruction in Assaying, Surveying, Etc.

Anderson, F. H.....	Meaford.
Burns, J. G.....	Toronto
German, A. M.....	Welland.
Hamil, C. B.....	Charing Cross.
McLeod, A.....	Goderich.
Parker, H. A.....	Blairton.
Prowd, E. B.....	Vancouver, B.C.
Simmons, J. F. L.....	Brantford.
Trebilcock, J. A.....	Toronto.

### Summary.

First Year Students.....	144
Second Year Students.....	142
Third Year Students.....	179
Fourth Year Students.....	161
Students of Other Faculties.....	9
Occasional.....	1

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**FACULTY OF HOUSEHOLD SCIENCE.****Occasional Students, 1913-14.**

Adams, Miss E. F.....	Toronto	James, Miss A. L.....	Toronto
Adams, Miss L. C.....	Toronto	Kelk, Miss E.....	Toronto
Allan, Miss F. L.....	Toronto	Kemp, Miss E. A.....	Toronto
Allen, Miss J. M.....	Toronto	Kennedy, Miss J. P.,	
Anderson, Miss E. C.....	Toronto	Scarborough, Ont.	
Austin, Miss M. R.....	Toronto	Kingsley, Miss G. C.....	Toronto
Ball, Miss M.....	Toronto	Laird, Miss F. C.....	Toronto
Bergey, Miss E... New Dundee, Ont.		Langley, Miss M. I.....	Toronto
Bishop, Miss G. H.....	Toronto	Lewis, Miss N. M. Melita, Man.	
Boyd, Miss B. B.....	Toronto	Mabee, Mrs. M. G.....	Toronto
Browning, Miss B.....	Toronto	Macdonald, Miss J. C.....	Toronto
Buckland, Miss D. M.....	Toronto	Macpherson, Miss F. F.,	
Bundy, Miss E.....	Toronto	Stratford, Ont.	
Burk, Miss C.....	Toronto	Macpherson, Miss G. E... Toronto	
Campbell, Miss M. F....	Toronto	Marks, Miss A. M.....	Toronto
Campbell, Miss M. J. C...	Toronto	McCausland, Miss.....	Toronto
Cassels, Miss A.....	Toronto	Nordheimer, Miss Y. A. F. Toronto	
Cassels, Miss M. S.....	Toronto	Prangley, Miss A. M., Dresden, Ont.	
Caulfield, Miss K.....	Toronto	Rankin, Miss R. B., Roanoke, Va.	
Cayley, Miss A. M.....	Toronto	Rennie, Miss E. B.....	Toronto
Cober, Miss L. E.....	Toronto	Rennie, Miss G. M.....	Toronto
Collins, Miss V. I.....	Toronto	Rothery, Miss R. C.....	Toronto
Crowther, Miss L. C.....	Toronto	Ryerson, Miss L. M.....	Toronto
Curren, Miss M. M.....	Toronto	Simpson, Miss G. M.....	Toronto
Denne, Miss P. Peterborough, Ont.		Skirrow, Miss O. M.....	Toronto
Denton, Miss D.....	Toronto	Smith, Miss I. W.... Weston, Ont.	
Diamond, Miss B. B. H...	Toronto	Spence, Miss E. A.....	Toronto
Douglas, Miss M. E.....	Toronto	Stell, Miss H. C.....	Toronto
Eddis, Miss E. M.....	Toronto	Stockwell, Miss E. L.....	Toronto
Emery, Miss N. K.....	Toronto	Stone, Miss L. E.....	Toronto
Fenton, Miss A. E.....	Toronto	Strathy, Miss D.....	Toronto
Gibbon, Mrs. J. J.....	Toronto	Talbot, Miss P. E.....	Toronto
Gouinlock, Miss K.....	Toronto	Thompson, Miss M.....	Toronto
Graham, Miss M. A. Newboro, Ont.		Wagstaff, Miss E.....	Toronto
Hodson, Miss A. K.....	Toronto	Walker, Miss E. N.....	Toronto
Holt, Miss M.....	Toronto	Wetmore, Miss C. J.. Truro, N.S.	
Huestis, Miss G.....	Toronto	Whyte, Miss J.... Stratford, Ont.	
Hunton, Miss M. D. Sackville, N.B.		Wilson, Miss E. R.....	Toronto
Hyde, Miss H. F.....	Toronto	Wilson, Miss M.....	Toronto
Jackman, Miss R. R.....	Toronto	Wright, Miss V.....	Toronto

**Department of Education Students, Spring Session, 1914.**

Anderson, Miss I. . . . Elmvale, Ont.	Clyde, Miss L. . . . Chatham, Ont.
Armstrong, Miss L. V.,	Ford, Miss F. L. . . . Port Perry, Ont.
Palmerston, Ont.	Haight, Miss H. M.,
Asselstine, Miss G. A. B.,	Parry Sound, Ont.
Odessa, Ont.	McCulloch, Miss J. A., Guthrie, Ont.
Bolton, Miss M. E. . . . . Perth, Ont.	Murphy, Miss B. . . . . Orillia, Ont.
Buchanan, Miss J. J. . Hensall, Ont.	Richardson, Miss P. . . . Perth, Ont.
Burke, Miss E. M. . . . Reaboro, Ont.	Thompson, Miss M. C., Jordan, Ont.

**Summary.**

Occasional Students. . . . .	78
Departm't of Education Stu'ts. . . . .	13
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Total. . . . .	91



**FACULTY OF EDUCATION,  
REGISTER OF STUDENTS, 1913-1914.**

**Advanced Course.**

Allen, Lillian M.....	Toronto.	Jenner, Madeline M...	Kingsville.
Allison, Rowena.....	Toronto.	Kennedy, Jessie.....	Thorndale.
Arnold, Leita E.....	Athens.	Keogh, Maud A.....	Aldershot.
Ashall, Elsie.....	Toronto.	Kerr, Maybelle G...	Owen Sound.
Atkin, Edith.....	St. Thomas.	Kettlewell, Beatrice M...	Toronto.
Barlow, Fred J.....	Toronto.	Kilgour, Hugh B.....	Toronto.
Bell, Edwin T.....	Toronto.	King, Eva W.....	Hickson.
Boyd, Friede K.....	Bobcaygeon.	Kinnear, Jennie A.,	Port Colborne.
Brownlee, Eva M.....	Elphin.	Macdonald, Frederick J...	London.
Burns, Jean.....	Brantford.	Mace, Isobel M.....	Toronto.
Burwash, Miriam...	New Liskeard.	MacKichan, Peter.....	Parkhill.
Clarke, Lorne H.....	Stouffville.	Macklin, Hattie.....	Stratford.
Clement, Jessie M....	Deseronto.	Madill, Fred C.....	Claremont.
Colbeck, Marjorie M....	Toronto.	Manley, Mary J.....	London.
Collins, James....	Carlsbad Springs	Martin, Grace.....	London.
Cook, Alta Lind.....	Toronto.	Martin, William H.....	London.
Crawforth, Alma W....	Whitby.	McCrimmon, Leon R....	Toronto.
Crawforth, Beatrice M....	Whitby	McGwan, Thomas J.....	Cobourg.
Danard, Chas. E.....	Kemble	McKenna, Bessie J....	St. Thomas.
Daniher, Ernest LeR...	Windsor.	McLean, Muriel G.....	Toronto.
Davidson, Annie B.....	Toronto.	McLellan, Mary A.....	Toronto.
Davis, Pearl I.....	Wingham.	McVean, Kathleen.....	Dresden.
DeGuerre, Laura B.....	Toronto.	Menzies, Leslie P.....	Sarnia.
Denton, Lily.....	Toronto.	Muirhead, Jessie.....	Toronto.
Devitt, Samuel G.....	Lindsay.	Murch, Norman L....	Stratford.
Douglas, Leila I.....	Strathroy.	Oldham, Ida M.....	Mr. Albert.
Eakins, Cora M.....	Toronto.	Owen, Margaret F.....	Toronto.
Elliott, Frederick V...	Bryanston.	Phelp, Winifred E.....	Brighton.
Elliott, Kathleen F....	Belleville.	Phillips, Edith V.....	Toronto.
Elliott, Martha G.....	Belleville.	Pugh, H. Clifford.....	Wingham.
Ferris, Kathleen B...	Campbellford.	Redman, Dora E.....	Birch Cliff.
Finch, Ilma M.....	Hagersville.	Robins, John D.....	Windsor.
Fleming, Rita M.....	Owen Sound.	Ross, Margaret C.....	Doon.
Forestell, Daniel L...	Campbellford.	Ross, Margery E.....	Welland.
Fraser, Emily.....	Stratford.	Rowlin, Blanche H.....	Toronto.
Gardner, Gwendolen...	Toronto.	Sims, Viola.....	Toronto.
Gauley, Robert J. P...	Brentwood.	Smillie, Emmaline E....	Toronto.
Grilroy, Emily I.....	Mount Forest.	Smith, Hilda C. H.....	Toronto.
Goring, Ralph B....	Woodstock.	Spence, Ruth E.....	Toronto.
Graham, Samuel J...	Fenelon Falls.	Stollery, Edith.....	Toronto.
Gray, Joseph E.....	Mayfield.	Taylor, A. May.....	Lorne Park.
Harper, Gertrude A....	Toronto.	Thomas, Isabel M.....	Toronto.
Heydon, Bertha M.....	Toronto.	Train, Florence B....	Collingwood.
Hodgson, Ernest A.....	Toronto.	Twiss, Dalton L.....	Tillsonburg.
Holmes, Margaret....	Winchester.	von Gunten, Louise....	Blenheim.
Hooper, Hazel C.....	Toronto.	Wallace, Muriel J. W...	Toronto.
Hunter, Rilla.....	Orangeville.	Wallace, Belinda.....	Woodbridge.
Ingham, Harriet.....	Toronto.	Watson, Hazel E.....	Georgetown.

Whitney, Viola L.....	Atherley.	Wilson, Margaret G...	Brampton.
Williams, Gypsy.....	Toronto.	Wookey, Gladys E.....	Toronto.
Williams, Winnifred.....	Ingersoll.	Zuern, Maude E.....	Toronto.
Willoughby, Ernest F.....	Chicago.		

### General Course

Adams, Edith F.....	Toronto.	Foster, Isabel.....	Cayuga.
Adams, Ada.....	Peterborough.	Fowler, Mary.....	Toronto.
Allen, Eula.....	Aylmer	Fritz, Myrtle E.....	Guelph.
Anderson, Kate F....	Niagara Falls.	Gleeson, Nora.....	London.
Archibald, S. Wallace...	Seaforth.	Gliddon, Mildred.....	Union.
Atkinson, Walter L.....	Guelph.	Grieve, Bessie M.....	Seaforth.
Barnby, Vera E.....	Lambeth.	Hale, Dorothy L.....	Orillia.
Bates, Nettie M. L.....	Aylmer.	Halford, Mary A..	St. Hyacinthe.
Beattie, Phyllis M.....	Hespeler.	Hall, Delia.....	Toronto.
Benness, Helen S.....	Toronto.	Halliday, Clarence P....	Chesley.
Bissett, Margaret.....	Goderich.	Hartley, Floyd C.....	Brantford.
Blake, Pauline A. M.....	Simcoe.	Hartry, Norma.....	Seaforth.
Boothby, Erma I.....	Collingwood	Henderson, John McC...	Brussels.
Brewster, Gladys I....	Havelock.	Hinchley, John M.....	Seaforth.
Brown, David D.....	Owen Sound.	Holmes, Clela P.....	Queensboro.
Bryant, Joyce.....	Midland.	Houser, Evelyn G...	Humberstone.
Cameron, Robert C.....	Tiverton.	Houston, William J...	Creemore.
Campbell, Margaret S.,	Northwood.	Howlett, Charlotte.....	Elora.
Carruthers, Orville K....	Almira.	Huffman, Gertrude E.	Woodstock.
Cavanagh, Tessie M.....	Barrie.	Hunter, Florence E.....	Hamilton.
Chantler, Annie.....	Toronto.	Ingoldsby, T. Gordon...	Mayfield.
Charteris, Gwendoline I.,	Chatham.	Jarvis, Charles R.....	Toronto.
Cleland, Margaret O.....	Listowel.	Job, Mabel D.....	Barrie.
Clemens, Grace A.....	Berlin.	Johnston, Helen A.....	Toronto.
Clement, Isabella.....	Chesterville.	Johnston, W. B.....	Winona.
Cochrane, Grace H.,	Owen Sound.	Jones, Mildred M.....	Bear Line.
Cole, Margery K.....	Dutton.	Jordan, John C.....	Dublin.
Condie, Bessie.....	Smith's Falls.	Kerr, Martin.....	Hamilton.
Coon, Myrtle I.....	Guelph.	Kerruish, Hubert B.....	Fergus.
Corkery, Emma....	Peterborough.	Kidd, Gazy A.....	Cookstown.
Crate, Della F.....	Toronto.	Lake, Ettie M.....	Hamilton.
Crosthwaite, Nellie....	Hamilton.	Laurie, Bessie M.....	Hamilton.
Dawson, Viola M.,	St. Catharines.	Lavis, Grant F.....	Morrisburg.
De Cou, Katherine E....	Chatham.	LeBoeuf, Emilie A.....	Ojibway.
Depew, Viola.....	Stoney Creek.	Leslie, Gordon E.....	Guelph.
Dickson, Archie C.....	Seaforth.	Leuty, Stanley...	Burnhamthorpe.
Donaldson, Alta S. I....	Ottawa.	Linklater, Ernest W....	Wingham.
Dowd, Winnie M.....	Listowel.	Lock, Ernest H.....	Toronto.
Drew, Cecil.....	Cannington.	Lyle, Laura.....	Smith's Falls.
Drew, Margaret W.....	Guelph.	Lynch, Anastasia E.....	Arthur.
Duff, Elizabeth A.....	Hamilton.	Lyons, Pauline.....	Woodstock.
Dunn, Catharine.....	Toronto.	MacDougall, Jean T....	Lindsay.
Easson, Ida B.....	Stratford.	MacGregor, Joan.....	Balaclava.
Fick, Ellis L.....	Tillsonburg.	Macintosh, N. J.....	Toronto.
Fiddis, Gordon.....	Elmwood.	Mackersie, William G.,	Uptergrove.
Finlayson, Roderick A.,		MacLeod, Georgina I..	Beamsville.
	Campbellton.	Manning, Kathleen.....	Toronto.
Fischer, Peter.....	Berlin.	Marshall, Alex. W...	Peterborough.
Fleming, Earl.....	Simcoe.	Marshall, Hazel J.....	Barrie.
Fleming, Eva.....	Grimsby.	Marwick, Bruce D.....	Watford.

Matthews, Frances.....	Hamilton.	Scott, Walter F.....	Brussels.
McBurney, Robert S....	Wingham.	Shannon, Norma.....	Napanee.
McClellan, John.....	Whitby.	Shepherd, Zilla E.....	Strathroy.
McCoig, Alice.....	Mull.	Sinclair, Daniel J.....	Stayner.
McCowell, John P.....	Hamilton.	Smyth, Annie F.....	Tormore.
McDonald, James H.....	Guelph.	Somerville, Eva.....	Goderich.
McDonald, Kate M.....	Cobalt.	Spaulding, Herbert E.....	Aurora.
McDonald, Margaret D...	Guelph.	Staples, Edna E.....	Orono.
McDonald, Robert H....	Lakeside.	Stapleton, Louis J., St.	Columban.
McDowell, Jane.....	Uxbridge.	Steinhoff, Ethel.....	Markham.
McKillop, Jessie.....	Dutton.	Stevenson, Marjorie....	London.
McKinnon, Archie L.....	Orton.	Stewart, Jennie.....	Pembroke.
McLellan, Norman A.,	Streetsville.	Stickwood, Herbert F.,	Newmarket.
McMillan, Roy J.....	Stratford.	Strathdee, Mary.....	Ripley.
McPhail, Alex H....	Campbellville.	Strickland, Valeria....	Cannington.
Melady, Thomas S.....	Dublin.	Stubbs, Mabel.....	Norval Station.
Melston, F. Beatrice....	Guelph.	Sullivan, D. N.....	Toronto.
Millard, Lena.....	Bridgeburg.	Swinton, Kathleen A....	Thorold.
Mole, William H.....	Toronto.	Tamblyn, Frank A.....	Blyth.
Mott, Olive.....	Norwich.	Thompson, M. Amelia,	Wellington.
Mullette, Fernia H.....	Lindsay.	Thomson, T. Muir.....	Brussels.
Murray, Gertrude.....	Toronto.	Trewin, Robert F.....	Toronto.
Nesbitt, Robert N.....	Lindsay.	Upper, Marion.....	Thorold.
Newton, Sarah E.....	Toronto.	Vogan, Robert G.....	Millbank.
Noble, William H.....	Castleberg.	Walker, Laura M.....	Toronto.
Nunn, Penelope L.....	Hamilton.	Ward, Elmer W.....	Meaford.
O'Connor, Camilla M....	Whitby.	Ward, Wilmyr G....	Niagara Falls.
O'Connor, Katie.....	Whitby.	Waring, Arthur W.....	Ingersoll.
O'Driscoll, Irene.....	Toronto.	Warnock, Grace I.....	Goderich.
Pacey, Mabel I.....	Havelock.	Watson, Eleanor.....	Waterloo.
Partridge, James A....	Warkworth.	Watson, Louisa S.....	Priceville.
Paton, William D.....	Fergus.	Watson, Marion.....	Seaforth.
Petrimoulx, Loretto M.	Sandwich.	Webster, Helen.....	Owen Sound.
Pike, Abram B.....	Bethesda.	Weiller, Eugene.....	Mildmay.
Porter, William A....	Ravenswood.	Wells, Vera M.....	Dresden.
Prueter, Herbert J.....	Listowel.	Wheeler, Harold A.....	Brigden.
Quantz, Ella I.....	Langstaff.	Whitelaw, Florence M.,	Woodstock.
Reid, Gladys M.....	Hamilton.	Wightman, K. St. C....	Sandwich.
Rhodes, Frances E....	Point Edward.	Wilson, Laura I.....	Brantford.
Rice, Elsie.....	Oshawa.	Wismer, May.....	Essex.
Roberts, Florence.....	Belleville.	Witton, Agnes P.....	Hamilton.
Robinson, Robert H....	Fergus.	Woodcock, Mary.....	Cobourg.
Ross, A. Munro.....	Innerkip.	Worden, Ernest H. G....	Guelph.
Scott, Jean L.....	Victoria Square.	Wright, Cassie.....	Hanover.

### Courses for Specialists only.

Baker, Marguerite.....	Toronto.	Henderson, James....	Craigsholme.
Browne, Carl S.....	Bowmanville.	Hone, Arthur D.....	Peterborough.
Campbell, Geo. Stewart,	Ridgetown.	Knox, John Knox....	Craigsholme.
Clarke, Bruce W.....	Toronto.	Leonard, Lottie P.....	Regina.
Durnin, Edwin W.....	Cornwall.	Lower, Arthur R.....	Barrie.
Ellis, Oscar F. W.....	Ottawa.	Morrison, William J....	Listowel.
Hair, Margaret.....	Waterford.	Parker, Frances Gray...	Seaforth.
Hall, Grace.....	Vankleek Hill.	Stenhouse, Rebecca...	Avonmore.
Hamer, Lottie E.....	Norwich.	Trotter, Elizabeth E....	Toronto.

**Courses for Degrees in Pedagogy.**

Amos, H. E.....	Grimsby.	Hunter, J. H.....	Coaticook.
Bell, W. N.....	Paris.	McCaig, James.....	Edmonton.
Emery, J. W.....	Stratford.	McKenzie, George W..	Red Deer.
Froats, Willis C.....	Carleton Place	Patterson, W. J.....	London.
Gibson, A. R.....	Red Deer.	Prendergast, William....	Toronto.
	Rutherford, W. H.....		Toronto.

**Course for Inspector's Certificate.**

MacDonald, Neil Smith..Toronto.

**Summary.**

Students in Advanced Course .....	103
Students in General Course .....	187
Specialists.....	18
Candidates for Degrees in Pedagogy .....	11
Candidate for Inspector's Certificate .....	1
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	320



**FACULTY OF FORESTRY.  
REGISTER OF STUDENTS, 1913-1914.**

**First Year.**

Aird, H. R.....	Toronto	Hughson, H. M.....	Ottawa
Bruen, A. McW....	Belvidere, N.J.	Johnston, R. A. C. N.....	Toronto
Burford, M.....	Toronto	Linton, M.....	Toronto
Clarke, T. A.....	Toronto	Lyons, R. W.....	Lucknow
Courtnege, R. A.....	Brantford	McCallum, A. W....	Smith's Falls
Davidson, A. T.....	St. Ann's	Mitchell, F.....	Port Hope
Dexter, W. E.....	Toronto	Mulloy, G. A.....	Aurora
Elliott, G. B. S.....	Kenora	Robinson, P. ....	Toronto
Hope, L. S.....	Hamilton	Snow, R. D. I.....	Judd Haven
Hughes, J. F. L.....	Edmonton	Williams, S. E.....	Toronto

**Second Year.**

Aiken, J. D.....	London	McEwen, P.....	Wroxeter
Campbell, R. A. R....	London, Eng.	Mills, C. R.....	Merrickville
Dallyn, G. M.....	Toronto	Porteous, H. A....	Edmonton, Alta.
Gilbert, A. V.....	Kingston	Simmons, J. L.....	Brantford
Gill, C. B.....	Pettapiece, Man.	Thurston, A. M.....	Flesherton

**Third Year.**

Clarke, D. E.....	Mountain	Prowd, E. B.....	Vancouver, B.C.
Greig, D.....	Breakeyville, Que.	Rance, T. F.....	Toronto
Kay, J.....	Toronto	Sloan, J. M.....	Bradford, Pa.
Pearce, W. M.....	Calgary, Alta.	Trebilcock, J. A.....	Toronto

**Fourth Year.**

Boyd, W. J.....	Smith's Falls	Delahey, W. A.....	Ottawa
Chamberlain, J. R.....	Toronto	Kynoch, W.....	Toronto
Connell, A. B....	Woodstock, N.B.	Robertson, F. B.....	Hagersville

**Occasional Students.**

Johnson, H. B.....	Toronto	Roberts, E. H.....	Detroit, Mich
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**ARTS AND FORESTRY.****First Year.**

Bolté, A. A. .... Toronto

**Second Year.**

Bentley, A. W. .... Sarnia

**Fourth Year.**

Parker, H. A. .... Blairton

**Fifth Year.**

Morse, C. H. .... Adelaide

**Sixth Year.**

Campbell, R. L. .... Ottawa

**Summary.**

First Year Students.....	21
Second Year Students.....	11
Third Year Students.....	8
Fourth Year Students.....	7
Fifth Year Students.....	1
Sixth Year Students.....	1
Occasional Students.....	2
	—
Total .....	51

**General Summary.**

## Faculty of Arts:

University of Toronto.....	757
University College.....	1,027
Victoria College.....	532
Trinity College.....	144
St. Michael's College.....	114
	— 2,574
Faculty of Medicine.....	623
Faculty of Applied Science and Engineering .....	627
Faculty of Household Science.....	91
Faculty of Education.....	320
Faculty of Forestry.....	51
	— 4,286
Registered in two Faculties.....	52
	—
Grand Total.....	4,234

### HISTORICAL SKETCH

The movement which ended in the establishment of the University of Toronto as the centre of the educational system of the Province of Ontario originated with General Simcoe, the first Governor of Upper Canada, who repeatedly expressed his conviction, both before his departure from England and also during his term of office (1792-1796), that the best interests alike of the Government and of the inhabitants demanded the establishment of a University in Upper Canada. It was not, however, during his administration that the project assumed a definite form.

In 1797 the Legislative Council and House of Assembly in a joint address to King George III. asked "that his Majesty would be graciously pleased to direct his Government in the Province to appropriate a certain portion of the waste lands of the Crown as a fund for the establishment and support of a respectable Grammar School for each district thereof; and also a College or University for the instruction of youth in the different branches of liberal knowledge". To this address a favourable answer was transmitted, and the acting Lieutenant-Governor, the Hon. Peter Russell, was directed to determine the manner and character of the appropriation. In accordance with this request the Executive Council of Upper Canada reported on the 1st December, 1798, that an appropriation of 500,000 acres would be sufficient for the support and maintenance of four Grammar Schools and a University. For the foundation of the latter nothing was done until 1827, when a Royal Charter was granted for the establishment at or near York, as Toronto was then called, of a College, "with the style and privileges of a University", to be called "King's College", having for its endowment that portion of the grant of "waste lands" originally provided for the University in the report above referred to. These lands were in 1828 exchanged for 225,944 acres of Crown Reserves.

Owing not only to the character of the endowment, which required time for its realization in the form yielding an annual revenue, but also owing to the terms of the charter, which required all the members of the Faculty to be adherents of one particular religious denomination, the opening of the College was delayed for fourteen years. In consequence of public representations on the sectarian character of the College, all religious tests were abolished by an amended charter which passed the two Houses of the Provincial Legislature and received the Royal Assent in 1837. In 1842 the affairs of the University had assumed such a condition as to render its organization possible, and Faculties of Arts, Medicine, Law and Divinity were established. In that year the erection of the College Building was begun on the eastern portion of the site of the present Legislative Buildings. In 1843 the first matriculation of students took place, and inaugural addresses and lectures were delivered on the 8th and 9th of June of that year.

The agitation which resulted in the amended charter of 1837 had continued after the opening of the College in 1842, owing to the efforts made to defeat the purpose of the amendment, and in 1849 an Act of the Legislature effected important modifications in the constitution of King's College whereby all instruction in Divinity was discontinued, and a larger measure of public control of the affairs of the University instituted, through the formation of a Senate, of which a number of the members were appointed by the Crown. The name was now changed from that of "The University of King's College" to that of "The University of Toronto".

Three years afterwards the University underwent a further transformation, by which the Act of 1853 abolished the Faculties of Medicine and Law, and divided its functions between the two newly organized corporations of the "University of Toronto" and "University College". To the Senate were assigned the duties of framing the curriculum, holding examinations and admitting to degrees in Arts, Law and Medicine, while to the President and Professors of University College, as a distinct and independent corporation with special powers, were assigned the teaching in Arts and the entire discipline and control of students. The models followed in the reorganization of the University, it was claimed, were the University of London and University College, London, both of which had then been only recently established. For thirty-four years the University of Toronto and University College performed the functions respectively assigned to them by this Act.

During the early years of the University it experienced repeated changes in its local habitation. The faculty and students of King's College were at first temporarily accommodated in the Parliament Buildings until the erection of the east wing of King's College admitted of the occupation of their own building. From this they were anew transferred to the old Parliament Buildings in 1853, when, by a special Act, the site of King's College was appropriated for the proposed new buildings for the use of the Parliament of Upper and Lower Canada. On the return of the Legislature to Toronto, in 1856, the Faculty resumed the occupation of the old King's College Building, while one formerly in use by the Medical Faculty, situated on the site of the present Biological Building, was being adapted for their occupation. There accordingly the work of the College was carried on, pending the erection of the new University buildings. These buildings were begun in 1856, and on October 4th, 1859, the top stone of the main tower was placed in position by Sir Edmund Head, the Governor-General, an old Oxford professor, the value of whose sympathy and support at this critical period in the history of the University cannot be overestimated.

For thirty-four years the constitution of the University of Toronto and of University College remained unchanged. Other collegiate bodies, principally denominational schools of theology, entered into affiliation with the University, and, with regard to their especial requirements, the course of study in Oriental Languages was augmented, but the Faculty of University College continued to do the work of instruction for nearly all the students in Arts who presented themselves for examination. The candidates for

examination and degrees in medicine were trained in medical schools in affiliation with the University, and for degrees in Law the examinations were based upon text-books prescribed by the Senate, without teaching.

In 1887 both the University of Toronto and University College were remodelled by the University Act. The main object of renewed legislation was to secure a more uniform standard of higher education by the union of the various denominational universities of Ontario with the Provincial University. Since the proclamation of the Act, Victoria University at Cobourg, representing the Methodist body, has entered into federation with the University of Toronto. The governing body of this institution is now represented on the Senate of the University of Toronto, its graduates elect representatives to the same body, and by the removal of the faculty and students of Victoria University to Toronto, where college buildings have been erected to the north of Queen's Park, the union of the two universities has been effected. Under the Federation Act, the theological colleges, also formerly in affiliation with the University of Toronto, have become federated colleges, and enjoy increased representation on the Senate.

The Faculty of University College, by the Act of 1887, consists of professors and lecturers in Classic Languages and Literature (including lectures in Ancient History), Oriental Languages, English, French, German and Moral Philosophy. All other portions of the Arts course are assigned to the Faculty of the University of Toronto, of which the lectures are made equally available to the students of University College, and those of all federating universities and colleges. For the maintenance of certain of the departments of science on a scale demanded by modern methods of research, special provision has been made by the erection of new and the enlargement of old buildings. In the new Biological Building every facility is now provided for practical training in Biology and Physiology. The Chemical Building was completed in 1895, and affords similar facilities for practical work in Chemistry.

A Faculty of Medicine in the University of Toronto was established immediately upon the passing of the Act in 1887, and teaching is imparted in all branches of medical science. All the advantages of the Faculty of Arts are available for students in Medicine, and the laboratories of the scientific departments are utilized equally by students in both faculties. In 1903 the new Medical Building was opened.

In 1888 a stimulus was given to the study of scientific methods of farming by the affiliation of the Ontario Agricultural College and the adoption of a curriculum of study for the degree of Bachelor of the Science of Agriculture. Similarly an examination for the degree of Doctor of Dental Surgery was instituted, as a consequence of the affiliation of the Royal College of Dental Surgeons of Ontario. The College of Pharmacy was subsequently admitted to affiliation and a curriculum in Pharmacy prescribed. On the affiliation of the Toronto College of Music a curriculum of study was prepared for the degree of Bachelor of Music. The School of Practical Science was affiliated in 1889, and graduates of the School are specially eligible on certain conditions for the degree of Bachelor of Applied



Science and of various degrees in Engineering in the University. By a recent enactment of the Senate a curriculum was prescribed leading to the degrees of Bachelor and Doctor of Pedagogy. In 1897 a course of study was established leading to the degree of Doctor of Philosophy in certain of the Arts departments. In 1897 the Ontario Veterinary College was also affiliated.

On February 14th, 1890, the Main University building was partly destroyed by fire. In the reconstruction thereby rendered necessary, opportunity was afforded for important improvements in lighting, heating and ventilation. Considerable extension was effected in the numbers, capacity and equipment of the lecture rooms and laboratories. A new library building was erected on plans embracing the most recent improvements suggested by the experience of leading universities in the United States and elsewhere. A building for the accommodation of the Gymnasium was erected in 1892, and additions to it were completed in 1894 for the accommodation of student societies.

One of the most important events of recent years was the federation of the University of Trinity College, which was proclaimed by His Honour the Lieutenant-Governor on the 18th of November, 1903, and came into effect on the 1st of October, 1904.

The passing of the University Act, 1906, is the latest and most important development in the history of the University. A short account of the changes of greatest importance will be found in the early portion of this calendar under the title "Constitution and Administration of the University".

As provided in the University Act of 1906, St. Michael's College was declared to be a College in the Faculty of Arts on the 8th of December, 1910.

### THE ROYAL ONTARIO MUSEUM.

The Royal Ontario Museum was officially opened by Field Marshal His Royal Highness the Duke of Connaught, Governor-General of Canada, on the afternoon of Thursday, March 19th, 1914. This event marked a memorable occasion in the history of Art and Science in the Province of Ontario.

The Royal Ontario Museum was established under an Act of the Legislative Assembly of Ontario in the year 1912. According to the Act the purposes of the museum are:—

(a) The collection and exhibition of objects of every kind calculated to illustrate the natural history of Ontario, and thereby to aid in a knowledge of what this province is able to contribute to science and industry.

(b) The collection and exhibition of objects of any kind calculated to illustrate the natural history of the world and the history of man in all ages.

(c) Such other objects as may be authorized by the Lieutenant-Governor in Council.



The Museum is governed by a Board of Trustees, a body corporate consisting of ten members. The Minister of Lands, Forests and Mines and the Minister of Education of the Province of Ontario, and the Chairman of the Board of Governors of the University of Toronto are ex-officio members of this Board. The other seven members are appointed—four by the Lieutenant-Governor in Council, and three by the Governors of the University of Toronto.

The present members of the Board of Trustees are:—

*Ex-officio:*

HON. W. H. HEARST, Premier and President of the Council, Minister of Lands, Forests and Mines,

HON. DR. R. A. PYNE, Minister of Education,

SIR EDMUND WALKER, Chairman of the Board of Governors, University of Toronto;

*Appointed by the Lieutenant-Governor in Council:*

SIR EDMUND OSLER,

HON. FRANCIS COCHRANE,

J. B. O'BRIAN, ESQ.,

MRS. H. D. WARREN;

*Appointed by the Governors of the University of Toronto:*

SIR WILLIAM R. MEREDITH, Chancellor of the University,

DR. ROBERT FALCONER, President of the University,

Z. A. LASH, ESQ., K.C.

The cost of the erection of the building and the maintenance thereof is borne in equal amounts by the Province of Ontario and the University of Toronto. The present building, inclusive of offices, is 360 feet long and 60 feet wide and was erected at a cost of about \$400,000. The large section of University property lying between the present building and Avenue Road has been reserved by the Board for the extension of the Museum. The proposed plans show the building in the form of a hollow square with a handsome stone front facing Bloor Street.

Under Section 20 of the Museum Act the Board is empowered to establish various departments of the Museum which are to be designated "The Royal Ontario Museum of .....". In accordance with this by-law the Board has already established the Royal Ontario Museums of Archaeology, Geology, Mineralogy, Palaeontology and Zoology.

The establishment of this museum conjointly by the Province of Ontario and the University of Toronto is due in very large measure to the enthusiasm and leadership of Sir Edmund Walker, the Chairman of the Board of Trustees.

## ARCHAEOLOGY.

The Royal Ontario Museum of Archaeology is under the direction of Mr. C. T. Currelley, and is designed to show the best work which was done in the different crafts by the people of the past. An attempt has been

made to show the history of the development of each of the great arts which have made civilization possible, by exhibiting the best examples of the early stages of development, of the culminating point, and then of the decline.

For the Stone Age the collection is very large, almost world-wide. The use of the early metals (copper and bronze) in the evolution of important tools is shown by a series of examples grouped under the Last Pre-historic Collection.

A large Egyptian series and a smaller Babylonian collection exhibit the history of pottery, stone vases, weapons, jewelry, medicinal articles, tools, textiles, sculpture and objects connected with death and burial. These exhibits occupy three galleries.

A gallery is devoted to the exhibition of objects illustrating Greek and Etruscan art and handicraft. Vase making and painting is well shown by excellent series from Cyprus and Etruscan localities. Bronze helmets and bronze belts are exhibited in a collection presented by Colonel D. R. Wilkie, and this gallery also contains a remarkably fine Venus of the first quarter of the 4th century, and a torso of Bacchus presented by Mr. J. W. L. Forster.

The next gallery is devoted to the Walter Massey Biblical Collection, which contains many objects illustrating the life of the common people of the time of Christ. At one end of this room there is a large collection obtained from the tombs of Palestine, dating from before the coming of the Hebrews down to the Arab conquest.

A gallery is devoted to the exhibition of articles illustrating the life of races among whom primitive conditions have continued almost down to the present time, e.g., the Eskimos, the Africans, and the inhabitants of the islands of the Pacific.

Parallel to this gallery runs a collection illustrating the life of the American Indian. The best section of this was bequeathed to the Museum by the late Edmund Morris. The late Dr. Oronohyatekha also contributed much to this gallery, wherein is deposited a collection of portraits of Indian chieftains made by the late Edmund Morris. The most important collection of Indian pictures in the world, by Paul Kane, the Canadian, and by Catlin, the American, has been acquired for this gallery through the generosity of Sir Edmund Osler.

The central hall of the ground floor contains the extensive collection of arms and armour presented by Sir Henry Pellatt, and some good pieces of wood carving that were once parts of the altars of European churches. Also a fine collection of chests presented by Mr. M. Langmuir, the Ames collection of primitive moneys, and a beautiful series of fans presented by Mrs. O'Brian are among the important objects in this gallery.

The ground floor contains the remarkably fine collection of laces presented by Mrs. H. D. Warren, and the exquisite embroideries acquired through the kindness of Mrs. Massey Treble. Here also is the gallery of majolica and glass containing the Sir Edmund Osler Collection of majolica, the Mrs. Frank MacMahon Collection of glass, and the interesting collec-

tion of Chinese porcelains presented by Sir Edmund Walker and Mrs. H. D. Warren. Furniture, tapestry, velvets and many other objects are also exhibited on this floor.

### GEOLOGY.

The Museum of Geology is under the direction of Professor A. P. Coleman and occupies the gallery along the west front of the basement. The ten alcoves into which the gallery is divided are designed to exhibit material illustrating the mineral resources of Canada and Economic and Structural Geology in general. It is intended that this gallery should be devoted to *ores* rather than to *minerals*, and it depends for its advancement on the generosity of mining men throughout the country.

The more important collections now in position in this gallery are the Cobalt silver ores, specimens illustrating the geology and ore deposits of the Sudbury nickel field, the coals of Canada, the asbestos and mica mines, and most of the metalliferous mines of Canada and other parts of the world. A particularly valuable exhibit is one illustrating the occurrence of ice ages at different times in the history of the earth. The more important marble producing regions of America are represented by a fine series of pedestals.

### MINERALOGY.

In the mineral gallery which is under the direction of Professor T. L. Walker, are found very extensive collections of minerals and rocks. The most generous benefactors of this section are the men connected with the mining industry. To make the collections useful to visitors, the large specimens contained in the high cases are provided with special explanatory labels. While the display of Canadian minerals and rocks is very complete, there are three sections for which space has been reserved, and the development of these depends upon the assistance of interested persons.

### PALAEONTOLOGY.

The Museum of Palaeontology is under the direction of Professor W. A. Parks, and occupies the middle section of the top floor of the building. The collection of fossils is very extensive and contains many rare and unique specimens. It has developed from a nucleus presented by Sir Edmund Walker some years ago. Among the more important exhibits are the type Cambrian fossils presented by Sir William MacKenzie, the fossil sea-lilies presented by Mr. Frank Springer of Burlington, Iowa, a large fossil reptile presented by Sir Edmund Walker, Sir Donald Mann, Sir Lyman Melvin Jones and others. Recently a very fine skeleton of the extinct moa of New Zealand was added.

The department is provided with commodious storage and preparation rooms equipped with the necessary appliances for cutting and polishing specimens.

## ZOOLOGY.

Provision has recently been made for a section devoted to the Natural History of Animals, under the direction of Professor B. A. Bensley. A floor space of 6000 square feet is now available for this purpose in the north division of the upper gallery, the furnishing of which is now in progress. The collection now being installed illustrates the animals of Canada, but the collection will be made general as soon as the present building is enlarged.

A large portion of the valuable collection of the present Biological Museum of the University of Toronto, including a part of the old Natural History collection which was saved from the main building, when the latter was destroyed by fire, is being transferred to the new quarters. This will, however, form only a nucleus for the proposed Canadian collection, the further development of which will depend largely on private and public co-operation.

## ADDITIONS TO COLLECTIONS.

The collections of the Royal Ontario Museum and of the Museums of the University have been enlarged during the Session 1913-14 by purchases, donations and exchanges. The more important acquisitions are appended.

## ZOOLOGY.

The Biological Museum and the Royal Ontario Museum of Zoology have received the following gifts:—

1. Nests and eggs of Mangrove cuckoo, cat-bird and song-sparrow, and eggs of British birds, from Mr. Lewis B. Brown, Toronto.

2. A living tarantula, from Mr. Walker Groves, Toronto.

3. An unusually fine skeleton and head of the African white rhinoceros, prepared by Mr. A. Pride, from a specimen which died at Brantford. Presented by the management of Barnum and Bailey.

4. There has been added to the Museum a portion of the valuable collection of the late Dr. Oronhyatekha, presented by the Independent Order of Foresters, including eggs of ostrich and cassowary, a hawks-bill turtle, a diamond-backed rattlesnake and various specimens of fishes, shells and corals.

5. A case of silk moths. Presented by Mr. Paul Hahn.

6. A mounted specimen of an almost white moose. Presented by Mr. James B. Tudhope, Orillia.

7. A collection of Fijian shells. Presented by Dr. Allan Allan, Toronto.

8. A collection of Japanese shells. Presented by Mr. Charles A. Snazelle, Toronto.

9. There has been entered in the collection a series of eleven bird skins, from the Biological Station, Georgian Bay.

10. A mounted specimen of a white wolf. Presented by Mr. R. R. McIntyre, London, Ont.

11. A single mammoth tooth. Presented by Rev. R. S. Mason, St. Catharines.



12. Prepared skulls of African lion, leopard and Persian cat. Presented by Mrs. Elizabeth Sanderson, Toronto.

13. A valuable collection consisting of 236 bird skins. Presented by Mr. Lionel Goldie, being the collection of his late father, Mr. James Goldie, of Guelph.

Mr. L. A. Thomson, of Moosomin, Sask., has deposited with the Museum a valuable collection of mounted birds and mammals from western Canada.

#### BOTANY.

Scott collection of Canadian plants. 6,000 sheets. By Principal William Scott of Toronto Normal School.

Ottawa plants. 400 sheets. E. M. Saunders, Esq., Toronto.

Torrend collection of slime moulds, mainly Portuguese. 149 species. Professor C. Torrend, Lisbon.

Hungarian plants. 100 sheets. By exchange. Dr. F. Filarszky, Hungarian National Museum, Budapest.

Contributions of specimens by various students and members of the Staff:

Set of sections of Pettycur plants (fossil). By Prof. W. T. Gordon, King's College, London.

Collection of gnetales and australian plants from South Africa and Java. Prof. W. P. Thompson, Saskatoon, Sask.

Australian and New Zealand plants. 800 sheets. By Prof. Josephine Tilden, Minneapolis, Minn.

Indian pines from Indian Forest Service.

Farmers' seed collection (100). G. H. Clark, Esq., Seed Laboratory, Ottawa.

Goeppert's fossile arboretum. A collection of 30 slides.

#### MINERALOGY.

The collections of the University and of the Royal Ontario Museum of Mineralogy have been enlarged during the year by purchases, donations, and exchanges. The following lists contain the names of our chief benefactors:—

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United States National Museum, Washington, D.C.

Field Museum of Natural History, Chicago, Ill.

Mineralogiske og Geologiske Museum, Copenhagen, Denmark.

Geological Survey of Canada, Ottawa.

Lehigh University, South Bethlehem, Pa.

W. A. Roebling, Trenton, N.J.

W. T. Watkins Brown, Sydney, N.S.W.

##### BY DONATION.

American Museum of Natural History, New York City.

J. W. de Agüero, New York City.

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 Barber Asphalt Paving Co., Philadelphia, Pa.  
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 Canadian Copper Ore Co., Copper Cliff, Ont.  
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 Paul Hahn, Toronto.  
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 J. B. O'Brian, Toronto.  
 C. A. O'Connell, Kirkland Lake, Ont.  
 Hon. C. J. Osman, Hillsborough, N.B.  
 J. Palmer, Manager, Worthington Mine, Worthington, Ont.  
 Professor A. L. Parsons, University of Toronto.  
 E. F. Pullen, Alexo Nickel Mine, Iroquois Falls, Ont.  
 Sir Henry Pellatt, Toronto.  
 Elias Rogers Coal Co., Toronto.  
 P. A. Robbins, Hollinger Gold Mines, Timmins, Ont.  
 Edward Schoch, Warmbaths, Transvaal.  
 Hon. Geo. Smith, Thetford Mines, Que.  
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 J. B. Stitt, University of Toronto.  
 Col. Stevenson, Pearl Lake Mining Co., Schumacher, Ont.  
 Nelson W. Sweetser, Phoenix, B.C.  
 C. S. Wright, Caius College, Cambridge, England.  
 S. A. Wookey, Sydenham, Ont.  
 Rev. C. J. Young, Madoc, Ont.

#### PALAEONTOLOGY.

The more important acquisitions to the Museum of Palaeontology during the academic year 1913-14 are as follows:—

#### BY DONATION

Dr. Edgar Teller, Milwaukee, Wis. Collection of Lockport fossils from Wisconsin.

J. B. Tyrrell, Esq., Toronto. Large collection of Ordovician and Devonian fossils from the district of Patricia.

Dr. George, Boulder, Col. Collection of Colorado fossils.

#### BY PURCHASE

Devonian crinoids and trilobites from Europe.

An excellent skeleton of a moa from New Zealand.

#### BY EXCHANGE.

Dr. A. Bigot, Caen, France. Large collection of Normandy fossils.

Dr. C. de Stephani, Firenze, Italy. Collection of Italian fossils.

#### BY COLLECTION

Professor Coleman. Tusk of a mammoth from the Klondike gravels.

Professor Coleman. The head of a young groundhog from the interglacial beds of the Don Valley.

Professor Parks. Oriskany, Onondaga and Hamilton fossils.

#### GEOLOGY.

The more important acquisitions of the Museum of Geology during the academic year 1913-14 are as follows:—

#### BY DONATION

The Asbestos Corporation of Canada. Large specimen of rock with asbestos veinlets, and a series of asbestos products.

The Tonkin-Dupont Graphite Co. Large specimen of graphite from Wilberforce, Ont.

J. B. O'Brian, Esq., Toronto. Fine specimen of native silver from the O'Brian Mine, Cobalt, Ont.

The Ontario Marble Co., Toronto. Large pedestal of marble from Bancroft, Ont., showing five varieties.

#### BY PURCHASE.

Several series of specimens illustrating the formation of ore bodies. A copy of Wm. Smith's first geological map of England.

A replica of the bust of Sir Wm. Logan prepared for the Twelfth International Geological Congress which met in Canada in 1913.

#### BY COLLECTION

Professor Coleman. Copper ores and geological specimens from Alaska.

Professor Parks. Decorative stones from Quebec.

**DONATIONS OF BOOKS.**

Since the destruction of the University Library by fire in 1890, upwards of 46,000 volumes have been presented by various persons and organizations. Donations have been received between January, 1913, and January, 1914, from the following institutions and individuals:

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Aberdeen, University of  
 Aberdeen University Peace Society.  
 Aberdeen University Review.

Abrams, D. A., Urbana.  
 Académie Impériale des Sciences, St. Petersburg.  
 Academy of Natural Sciences, Philadelphia.  
 Academy of Science of St. Louis.  
 Academia Polytechnica do Porto.  
 Académie Royale des Sciences, Stockholm.  
 Accademia dei Lincei, Rome.  
 Agricultural Experiment Station, Orono, Me.  
 Agricultural Research Institute, Pusa.  
 Aix-en-Provence, University of  
 Akademie Ferienkurse zu Hamburg.  
 Alexander, Professor W. J.  
 Alpha Phi Quarterly, Menasha, Wis.  
 American Antiquarian Society, Worcester, Mass.  
 American Association for International Conciliation, New York.  
 American Catholic Historical Society, Philadelphia.  
 American Geographical Society, New York.  
 American Geological Society, New York.  
 American Historical Association.  
 American Law Book Company.  
 American Midland Naturalist.  
 American Mining Congress, Denver.  
 American Museum of Natural History, New York.  
 American Philosophical Society, Philadelphia.  
 American Proclologic Society.  
 American School Peace League, Boston.  
 Amherst College, Amherst, Mass.  
 Amherst Graduates' Quarterly, Concord.  
 Amsterdam (University of), Physiological Laboratory.  
 Anchora of Delta Gamma, Menasha.  
 Anderson, Hendrik C., Rome.  
 Antiquarian and Numismatic Society, Montreal.  
 "Applied Science", University of Toronto Engineering Society.  
 Armour Institute of Technology, Chicago.  
 Army Medical Service, London.  
 Arnold, B., Chicago.  
 "Arrow of Pi Beta Phi", Worcester, Mass.  
 Assoc. Elettrotec. Italiana, Milan.  
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 Benoy Kumar Sarkas, Prof., Bengal National College, Calcutta.  
 Bergens Museum, Norway.  
 Berlin—K. P. Akademie d. Wissenschaften.

Berlin—Gesellschaft Naturforschende Freunde.  
 Berlin—Gesellschaft für Erdkunde.  
 Board of Education, London, England.  
 Board of Supervising Engineers, Chicago.  
 Board of Trade, Chicago.  
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 Boston Public Library.  
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 British Museum.  
 British Association for the Advancement of Science.  
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 Brown University  
 Bruxelles, University of  
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 Budapest, Royal Hungarian University of  
 Buenos Aires—Universidad Nacional de la Plata.  
 Buenos Aires—Facultad de Derecho y Ciencias Sociales.  
 Buenos Aires—Facultad de Filosofía y Letras.  
 Buitenzorg—Department van Landbouw.  
 Bulletin des Recherches Historiques, Quebec.  
 Berne—Bureau International de la Paix.  
 Burt, A. L., Oxford.  
 Burton, C. M., Detroit.  
 Busbrudge, E. G.  
 Cambridge Historical Society.  
 California University.  
 Cambridge Philosophical Society.  
 Campbell, Graham  
 Canadian Antiquarian and Numismatic Society, Montreal.  
 Canadian Bankers' Association, Montreal.  
 Canadian Club of Halifax.  
 Canadian Forestry Association.  
 Canadian Institute, Toronto.  
 "Canadian Journal of Medicine and Surgery", Toronto.  
 "Canadian Liberal Monthly", Ottawa.  
 Canadian Manufacturers' Association, Toronto.  
 Canadian Peat Society, Ottawa.  
 "Canadian Practitioner and Review," Toronto.  
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Chicago School of Civics and Philanthropy  
Chicago, University of  
Chief Forester, Victoria, B.C.  
Child Hygiene Association of Philadelphia.  
Christiania, University of  
"Church Life," Toronto.  
Cincinnati, University of.  
City College, New York.  
City College Quarterly Association, New York.  
City Treasurer, Montreal.  
Cole, Dr., Cleveland.  
Clark University, Worcester, Mass.  
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Cole, L. G., M.D., New York City.  
Collège de St. Laurent, près de Montréal.  
College of Physicians of Philadelphia.  
Colorado, University of.  
Colorado College, Colorado Springs.  
Colorado School of Mines.  
Columbia University, New York City.  
Columbia University, Department of Physics.  
Commission on Compensation for Industrial Accidents.  
Commission on Relations between Colleges and Fraternities, New York.  
Commission Permanente Internationale des Maladies Professionnelles,  
Milan.  
Congrès Géologique International, Ottawa.  
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Connecticut State Library, Hartford.  
Co-operative Wholesale Society, Manchester.  
Copenhagen—K. Danske Videnskabernes Selskab.  
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Cornell University.  
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Cornyn, J. H., University of Mexico  
Crown Agents for the Colonies, London.

Cudmore, S. A.  
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 Denison (T. S.) & Company, Chicago.  
 Denver Public Library.  
 Detroit Observatory, Ann Arbor.  
 Deutsche Dendrologische Gesellschaft, Bonn.  
 Duetsche Ferienkurse für Ausländer, Freiburg i/B.  
 Dijon, University of.  
 Direktion d. deutschen Sprachen für Ausländer, Marburg.  
 Divinity School of Protestant Episcopal Church, Philadelphia.  
 "Dominion Medical Monthly," Toronto.  
 Dominion Meteorological Office, Toronto.  
 Douglas, James, New York.  
 Drexel Institute, Philadelphia.  
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 Dublin University.  
 Dundee, University of.  
 Dunedin Expansion League, N.Z.  
 Durham (University of) Philosophical Society.  
 École Pratique des hautes Études, Paris.  
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 Elgin Historical Society.  
 Ely, L., M.D., Stanford Medical School.  
 Erlangen, University of  
 Essex Institute, Salem.  
 Eugenics Record Office, Cold Spring Harbour, N.Y.  
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 Falconbridge, J. D.  
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 Field Museum of Natural History, Chicago.  
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 Fisk, E. L., M.D., New York City.  
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Houghton, Mifflin Company, Cambridge, Mass.  
Illinois, University of.  
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Illinois State Historical Society.  
Illinois State Laboratory of Natural History.  
Indian Museum (Natural History Section), Calcutta.  
Indiana Library Association.  
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International Congress of Actuaries, Amsterdam.  
International Peace Bureau, Berne.  
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Iowa State Historical Society.  
Iowa State University.  
Jena, University of.  
John Crerar Library, Chicago.  
Johns Hopkins Press, Baltimore.  
Johns Hopkins University.  
Journal de Médecine et de Chirurgie.  
Journal of Medicine and Surgery, Toronto.  
K. Leopold—Carolinische Deutsche Akademie d. Naturforscher, Halle.  
Kansas State Historical Society.  
Kansas State Industrial College.  
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King's College, Windsor, N.S.  
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Lewis Institute, Chicago.  
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"McMaster University Monthly".  
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Manchester Museum.  
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Otago University Museum, Dunedin, N.Z.

Ottawa Field Naturalists' Club.  
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 Pearson, W. H.  
 Pennsylvania—Chestnut Tree Blight Commission.  
 Pennsylvania Prison Association.  
 Pennsylvania, University of.  
 Philippines, University of the.  
 Pittsburgh, University of  
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 Porto, University of.  
 Prag, University of  
 Prag, K. K. Sternwarte zu.  
 Princeton Theological Seminary.  
 Princeton University.  
 Protestant Episcopal Hospital, Philadelphia.  
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 Public Library, Grand Rapids Mich.,  
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 Québec, Société de Géographie de.  
 Queen's University, Belfast.  
 Queen's University, Kingston.  
 Radcliffe Library, Oxford.  
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 Reading—University College Library.  
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 Raymond, Professor G. L., Washington.  
 R. Accademia dei Lincei.  
 R. Accademia de la Historia, Madrid.  
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 R. Accademia delle Scienze, Torino.  
 R. Accademia Virgiliana, Mantova.  
 R. Sociedad Espanola de Historia Natural, Madrid.  
 R. Universidad degli Studi di Pisa.  
 Recife—Faculdade de Direito.  
 Registrar, University of Toronto.  
 Revista de Archivos Bibliotecas y Museos, Madrid.  
 "Revue Canadienne", Montreal.  
 "Revue de l'Université de Bruxelles".  
 "Revue Economique Canadienne", Montreal.

Rhode Island Historical Society.  
 Rochester, University of  
 Rochester Theological Seminary.  
 "Rod and Gun in Canada".  
 Rose Polytechnic Institute, Terre Haute, Ind.  
 Rostock, University of.  
 Rousseau, C. M., San Francisco.  
 Royal Academy of Medicine, Ireland.  
 Royal Academy of Science, Amsterdam.  
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 Royal Astronomical Society, London.  
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 St. Andrew's University, Scotland.  
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 St. Joseph's College, University of.  
 St. Stephen's College, Annandale.  
 St. Thomas Hospital, London.  
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 Saskatchewan Educational Association.  
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 Seide, Dr. O., München.  
 Senckenberg. Naturforschende Gesellschaft.  
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 Society of Antiquaries, London (R. C. Thompson).  
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 Sociedad Espanola de Hist. Natural, Madrid.

Soc. Geol. Mexicana.  
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 Sorbonne, Paris.  
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 Southern California, University of.  
 Soyez-le-Roy, Mme., Lille.  
 Squair, Professor J., Toronto.  
 State Auditor, Field Marshal's Department, Helena, Montana.  
 State Auditor, Insurance Department, Helena, Montana.  
 State Entomologist, Urbana.  
 State Forester, Sacramento.  
 State Historical Department, Iowa.  
 State Historical Society, Iowa.  
 State Library, Sacramento.  
 State Historical Society of Wisconsin, Madison.  
 Statistical Bureau, Metropolitan Life Insurance Co., New York.  
 Sternwarte des eidg. Polytechnikum, Zurich.  
 Stevens Institute of Technology.  
 Stockholm—K. Vitterhets Historie och antikvitets akademien.  
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 Strong, Dr. A. H., Rochester.  
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 Texas State Historical Association, Austin.  
 Texas, University of.  
 Theosophical Society, New York.  
 Thompson (Edward) Company, Northport, L.I.  
 Thompson, S., Chicago.  
 Tohoku Imperial University, Sendai.  
 Tokyo, Imperial University of.  
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 "University of Toronto Monthly".  
 Toulouse, University of.  
 Town Clerk, Guildhall, London.  
 Town Clerk, Northampton.  
 oynbee Record.  
 Trinity University.  
 Trinity Church, Rector of, New York.  
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 Union of Graduates in Music, London.  
 Union Theological Seminary, New York.  
 U. S. Hay Fever Association, New York.  
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 Utah, University of.  
 Utrecht, University of.  
 Vail, D. T., M.D., Cincinnati.  
 Vassar College.  
 Verein für Geographie und Statistik, Frankfurt.  
 Verein für Schles. Insektenkunde in Breslau.  
 Vermont Historical Association.  
 Vermont, University of.  
 Victoria and Albert Museum, London.  
 Vienna, University of.  
 Vienna—K. K. Gradmessungsbureau.  
 Vienna—K. Akademie der Wissenschaften.  
 Virginia Historical Society, Richmond.  
 von Ruck Research Laboratory, Asheville.  
 Washington University, St. Louis, Mo.  
 Washington, University of, Seattle.  
 Wainright, Jacob, Chicago.  
 Warren Academy of Sciences.  
 Washington and Jefferson College, Pennsylvania.  
 Washington University State Historical Society, Seattle.  
 Wesleyan Theological College.  
 Wesleyan University, Middletown, Conn.  
 Western Reserve Historical Society.  
 Western Reserve University.  
 Westfälischen Provincial-Verein.  
 Wellcome Research Laboratories.  
 Williams College, Williamstown, Mass.  
 Williams, J. R., M.D., Rochester.  
 Wilson, J. C., M.D., Philadelphia.  
 Wilson Ornithological Club, Oberlin.  
 Women's Canadian Historical Society of Toronto.  
 World Peace Foundation.  
 Wrong, Prof., G. M.  
 Würzburg, University of.  
 Wyoming Historical and Geological Society, Wilkesbarré.  
 Yale University.  
 Yale Peruvian Expedition, New Haven.  
 Yeiser, J. O., Omaha, Neb.  
 York Pioneer and Historical Society, Toronto.  
 Yorkshire Philosophical Society.  
 Y.M.C.A., Toronto.  
 Zoological Society, London.



**PORTRAITS AND WORKS OF ART**

The following portraits and works of art have been presented to the University:

1. A portrait of the late Hon. William Hume Blake (oil painting by T. Hamel), presented by the Hon. Edward Blake.
2. A portrait of the Hon. Edward Blake, Chancellor 1876-1900 (oil painting by E. Wyly Grier), presented by graduates and friends.
3. A portrait of Professor E. J. Chapman (oil painting by Miss Frances Sutherland), presented by the artist.
4. A portrait of the late Professor Henry Holmes Croft (oil painting by A. Dickson Patterson), presented by friends of Professor Croft.
5. A portrait of the late President, Dr. McCaul (oil painting by A. Dickson Patterson), presented by the artist.
6. A portrait of the late Hon. Thomas Moss, Chief Justice of Ontario, Vice-Chancellor 1875-1881 (oil painting by Miss C. S. Berthon, copy of oil painting by M. Berthon), presented by the Hon. Charles Moss, Chief Justice of Ontario, Vice-Chancellor of the University.
7. A portrait of the late Right Reverend Bishop Strachan (oil painting copy), presented by the Council of University College.
8. A portrait of the late President, Sir Daniel Wilson (oil painting by A. Dickson Patterson), presented by friends of Sir Daniel Wilson.
9. A portrait of Professor E. J. Chapman (oil painting by A. Dickson Patterson), presented by graduates and friends.
10. A marble bust of the late Professor George Paxton Young (by Hamilton McCarthy), presented by friends of Professor Young.
11. A portrait of the late Professor George Paxton Young (oil painting by W. Allaire Shortt), presented by the artist.
12. A steel engraving of Sir John Colborne, afterwards Lord Seaton, Lieutenant-Governor of Upper Canada from 1830 to 1838, presented by Mr. Henry Hutchison.
13. "The Call to Duty" (oil painting by Paul Giovanni Wickson), presented to the Medical Faculty by the artist.
14. "The Marriage of the Duke of York" and "The King of Denmark's First Visit," commemorative medals, presented by the Town Clerk of London, Eng.
15. A bronze medal commemorative of the sesquicentennial anniversary of the founding of the College of New Jersey (Princeton University), presented by the trustees of Princeton University.
16. A bronze medal commemorative of the 150th anniversary of the capture of Louisbourg in 1745, presented by the Louisbourg Memorial Committee of the General Society of Colonial Wars.
17. A bronze medal commemorative of the 50th anniversary of Sir George Gabriel Stokes' appointment to a professorship in the University of Cambridge.

18. Busts of Dr. W. T. Aikins, Dr. J. H. Richardson, and Dr. H. H. Wright, by the Medical Faculty and other friends.

19. A bust of the late Hon. George Brown, and a portrait of the late Professor Croft, by Dr. Reeve.

20. Portraits of their Royal Highnesses the Prince and Princess of Wales, presented by their Royal Highnesses as a souvenir of their visit to the University in 1901.

21. A portrait of the Hon. Sir William Mulock, LL.D., ex-Vice-Chancellor of the University, presented by members of the Senate and other friends.

22. A steel engraving after Turner, by the late Sir Daniel Wilson, presented by Charles James Heywood, Esq., Manchester, Eng.

23. A collection of medals and coins, bequeathed by the late Dr. Scadding.

24. A portrait of Professor Goldwin Smith, presented by J. Ross Robertson, Esq.

25. A portrait of Dr. John Hoskin (oil painting by Robert Harris), presented by members of the Board of Governors and of the Senate and other friends.

26. A portrait of Dr. Maurice Hutton, Principal of University College (oil painting by William Cruikshank), presented by the Board of Governors.

27. A portrait of Sir Daniel Wilson, late President of the University of Toronto (oil painting by Sir George Reid), presented by members of the Board of Governors and of the Senate and other friends.

28. A portrait of Dr. R. A. Reeve (oil painting by Curtis Williamson), presented by members of the Board of Governors and of the Senate and other friends.

29. A portrait of Dr. John Galbraith (oil painting by J. W. L. Forster), presented by graduates of the Faculty of Applied Science.

30. A portrait of Dr. James Loudon, ex-President of the University of Toronto (oil painting by William Orpen), presented by the members of the Senate and other friends.

31. A portrait of Dr. James Loudon (oil painting by Frederick Victor Poole), presented by Mrs. Loudon.

32. A portrait of the Hon. Sir William Ralph Meredith, LL.D., Chancellor of the University (oil painting by William Strang), presented by members of the Board of Governors and of the Senate and other friends.

33. A portrait of the late Hon. Joseph Curran Morrison, Chancellor of the University of Toronto, 1860-1876 (oil painting by Charles Hayward) presented by Judge Hardy of Brockville.

34. A portrait of Dr. William Henry van der Smissen, Professor Emeritus of German in University College (oil painting by Professor Philip Otto Schaefer), presented by Mrs. van der Smissen.

35. A bronze medal commemorative of the 300th Anniversary of the founding of the University of Groningen.

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The following is a list of studies published up to July 1914:

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**FREDERICK HUGHES SCOTT.** 1900.

The Structure, Micro-Chemistry and Development of Nerve Cells, with special reference to their nuclein compounds. University of Toronto Studies, Physiological Series No. 1, 1900. Transactions of the Canadian Institute. 1898-99, Vol. 6, Parts 1 and 2, pp. 405-438.

**JOHN CUNNINGHAM McLENNAN.** 1900.

Electrical Conductivity in Gases Traversed by Cathode Rays. 1900. Philosophical Transactions of the Royal Society of London. Series A, Vol. 195, pp. 49-77.

**WILLIAM ARTHUR PARKS.** 1900.

The Huronian of the Basin of the Moose River. University of Toronto Studies, Geological Series, No. 1, 1900.

**FRANCIS BARCLAY ALLAN.** 1901.

The Basic Nitrates of Bismuth, 1901. American Chemical Journal, Vol. XXV., No. 4, April, 1901, pp. 307-315.

**ROSS GEORGE MURISON.** 1902.

The Mythical Serpents of Hebrew Literature, 1902.

**RICHARD DAVIDSON.** 1902.

The Semitic Permansive-Perfect, 1902.

**WALTER REUBEN CARR.** 1903.

On the Potential Difference required to produce electrical discharges in gases at low pressure, an extension of Paschen's Law. Transactions of the Royal Society of Canada, Second Series, 1902-1903. Vol. VIII., section III., pp. 161-182. 1902.

On the Laws governing electric discharges in gases at low pressures. Philosophical Transactions of the Royal Society of London, Series A, Vol. 201, pp. 403-433.

**EMMA SOPHIA BAKER.** 1903.

Experiments on the Æsthetic of Light and Colour. University of Toronto Studies, Psychological Series, Vol. I., No. 4.

Spectrally Pure Colours in Binary Combinations. University of Toronto Studies, Psychological Series, Vol. II., No. 3. 1902.

**GEORGE GALLIE NASMITH.** 1903.

The Chemistry of Wheat Gluten.

University of Toronto Studies, Physiological Series, No. 4.

The Transactions of the Canadian Institute, Vol. VII. 1903.

**CLARA CYNTHIA BENSON.** 1903.

The Rates of Reactions in Solutions containing Ferrous Sulphate, Potassium Iodide and Chromic Acid.

The Journal of Physical Chemistry, May, 1903, pp. 356-388.

**WILLIAM EDINGTON TAYLOR.** 1903.

The Ethics and Religious Theories of Bishop Butler.

Toronto: The Bryant Press. 1903.

THOMAS EAKIN. 1905.

The Text-book of Habakkuk, chap. I. 1—II. 4.

Toronto: E. D. Apted, n.d.

THOMAS RUTHERFORD ROBINSON. 1906.

Stereoscopic Vision and its relation to Intensity and Quality of Light Sensation. University of Toronto Studies. Psychological Series. Vol. II., Nos. 2 and 3. Reprint. n.d.

JOHN RANSON ROEBUCK. 1906.

The rate of the Reaction between Arsenious Acid and Iodine in Acid Solution; the rate of the reverse Reaction; and the Equilibrium between them.

The Journal of Physical Chemistry, Vol. VI., p. 365, and Vol. IX., p. 727. Reprint. n.d.

MAITLAND CREASE BOSWELL. 1907.

The Course of the Oxidation of  $\beta$ -Naphthoquinone to Phthalic Acid and the Detection and Estimation of  $\alpha$ -Naphthoquinone,  $\beta$ -Naphthoquinone, Phthalonic Acid and Phthalic Acid.

Toronto: The University Press. n.d.

RALPH EMERSON DELURY. 1907.

The Rate of Oxidation of Arsenious Acid by Chromic Acid and the Induction of Arsenious Acid by the Reaction between Chromic and Hydriodic Acids.

The Journal of Physical Chemistry, Vol. XI. Reprint. n.d.

DAVID STRATHY DIX. 1908.

Complementarism; Physical and Psychical. University of Toronto Studies. Reprint. n.d.

AUSTIN PERLEY MISENER. 1909.

The Place of Hosea I.-III. in Hebrew Literature.

Toronto: E. D. Apted. n.d.

JOHN FRANCIS MACKEY. 1909.

Part I.: Some Esters of Arsenious Acid.

Part II.: Some Esters of Antimony Trioxide. Reprint. n.d.

CALVIN ALEXANDER McRAE. 1910.

The Hebrew Text of Ben Sira (Ecclesiasticus).

Toronto: Queen Printing Co. n.d.

WILLIAM ROBERT TAYLOR. 1910.

The Originality of the Hebrew Text of Ben Sira in the light of the Vocabulary of the Versions.

Toronto: E. D. Apted. n.d.

WALTER DANIEL BONNER. 1912.

Experimental Determination of Binodal Curves, Plait Points, and Tie Lines in Fifty Systems, each consisting of Water and Two Organic Liquids.

ELI FRANKLIN BURTON. 1910.

On the Physical Aspect of Colloidal Solution. University of Toronto Studies, Physical Series, No. 36.

SAUL DUSHMAN. 1912.

The Behaviour of Copper Anodes in Chlorine Solutions.

The Journal of Physical Chemistry, Vol. XIV. Reprint. n.d.

JOSEPH ROY SANDERSON. 1912.

The Relation of Evolutionary Theory to Ethical Problems.

ABSALOM COSENS. 1913.

A Contribution to the Morphology and Biology of Insect Galls.

VIVIAN ELLSWORTH POUND. 1913.

I. The Absorption of the Different Types of Beta Rays together with Study of the Secondary Rays excited by them.

II. On the Secondary Rays excited by the Alpha Rays from Polonium. Part I.

On the Secondary Rays excited by the Alpha Rays from Polonium. Part II.

PERCIVAL WILSON SPENCE. 1913.

Moral Transitions in Israel between 1200 and 700 B.C.

EDWARD MOORE JACKSON BURWASH. 1914.

The Geology of Michipicoten Island.

## LOCAL LECTURES

These lectures are offered to the public so that it may be possible for those not able to attend the University to avail themselves of either single lectures or short courses of lectures on literary and scientific subjects. *If requests are made for lectures not found on the present list, an effort will be made to provide them.*

In order that the lecturers who give these Extension lectures should receive some recognition for their work, the Board of Governors of the University has decided that those arranging for such lectures should pay five dollars and the lecturer's travelling expenses for each lecture. For the encouragement of this work and to enable places outside the city of Toronto to receive the best service possible, the Board has set aside a sum of money which is calculated to pay the lecturer the same amount as he receives in fee from the local organization.

These Local Lectures are under the management of the Senate's Committee on University Extension.

The following programme of lectures was prepared and circulated early in the session of 1913-14:

PROFESSOR ALBERT H. ABBOTT—

1. A course of five lectures on the great problems of History of Philosophy down to the Seventeenth Century. (a) Mythology and the Beginnings of Philosophy; (b) Socrates and the Socratic Schools; (c) Christianity and the Patristic Period; (d) The Method and Results of Scholastic Speculation; (e) The Decline of Scholasticism and the Beginnings of Modern Philosophy.
2. A course of five lectures on the great problems of Modern Philosophy. (a) The Beginnings of Science and the Problem of Philosophy; (b) The British School and its Results; (c) The Continental Philosophers—Descartes, Spinoza, Leibnitz, Wolff; (d) Kant and the Idealistic Development; (e) The Influence of Scientific Discoveries on Philosophy.
3. A course of five lectures on Modern Psychology, to be illustrated as far as possible by experimental demonstrations. (a) The Investigation of Experience in the Adult, in the Child and in Animals; (b) Sensations and the Elements of Experience; (c) Imagination, Memory and Education; (d) The Emotions; (e) The Will.
4. A course of five lectures on the Problem of Human Nature as manifested in Daily Life and Social Institutions:—
  - (a) The Family as a Social Unit and Property Rights, in relation to the Problem of Sensation.
  - (b) Society as an Organism and the Problem of Relativity.
  - (c) Social Betterment and the Problem of Education.
  - (d) The Motive in the Individual to Social Betterment.
  - (e) The Individual's Rights and Duties.



## PROFESSOR JOHN A. AMYOT—

(Bacteriologist for the Provincial Board of Health.)

1. Microorganisms (Bacteria and Protozoa chiefly) and their Place in Nature.
2. The Uses made of Microorganisms in the Trades.
3. The Microorganisms of the Communicable Diseases.
4. The Avenues by which Infectious Microorganisms enter the Body, and how they cause Disease.
5. The Natural Defences of the Body against these Organisms.
6. The Artificial Means of Defence against Infective Diseases (Vaccines, Antitoxines, etc.).
7. The Preservation of Foods is chiefly based on Exclusion of Microorganisms.

## PROFESSOR G. R. ANDERSON—

1. The Development of Photography.\*
2. Scientific and Technical Photography.\*
3. Photography in Color.\*
4. Photogrammetry.\*
5. In Europe with a Hand Camera.\*
6. The Optics of Photographic Lenses.\*

## PROFESSOR B. A. BENSLEY—

- (1) The Mendelian Principles in Plant and Animal Breeding.\*
- (2) A German School System: An Account of the Present Organization of the Public and Apprentice Schools of Munich.\*
- (3) Eugenics: A Discussion of the Biological Aspects of Race Improvement.

## REV. E. E. BRAITHWAITE—

Lectures on Biblical Subjects:

1. A Bird's-eye View of the Historical Background and Contents of the Bible (or "The Bible in a Nutshell").
2. The Human History of the Bible (one or two lectures, including the text, canon, manuscripts, etc.).
3. Sound Principles of Biblical Interpretation (two lectures).
4. Messages of the Prophets (any number of lectures): (a) Those of the 8th Century B.C. (b) Those of the 7th Century B.C. (c) Any one prophet, as Amos, Isaiah, Jeremiah, Jonah, Daniel.
5. Messages of the Psalmists.
6. The Intermingling of the Human and the Divine in Life (one or two lectures): (a) The Human Element in Divine Revelation. (b) The Divine Element in Human History.
7. Tradition and Truth.
8. Religion and Modern Science.
9. Prayer and Modern Science.

Lectures on Travel.

1. Algiers.\*
2. Gibraltar.\*
3. The Azores.\*
4. Any of the principal Italian cities (Rome, Florence, Naples, Venice).\*

*\*Illustrated Lecture.*

## PROFESSOR G. S. BRETT—

- (1) Recent contributions to the Philosophy of Religion. (2) The contributions of Psychology to the Social Sciences. (3) Ancient and Modern Ethics.

These lectures will be given either individually or as a course.

## PROFESSOR C. A. CHANT—

1. A course of five lectures introductory to the study of Astronomy:—  
(a) The Earth and its Motions; (b) The Sun, our Ruler, and the Moon, our Attendant; (c) The other Planets, including a Discussion of the Canals of Mars; (d) Comets and Meteors, our strange Visitors; (e) The Stars; other Worlds of Space.
2. A course of five lectures dealing with the nature of the heavenly bodies:—(a) The Nature of Light and the Meaning of the Spectrum; (b) The Sun and how its Atmosphere is Explored; (c) The nature of the Moon and the Planets; (d) Comets and Meteors; how they move and what they are made of; (e) The Stars, other worlds like our own: their Nature and Life-history.
3. Individual lectures:—(a) A Study of the Sky (illustrated by star-maps, which will be distributed); (b) The Sun and its Secrets; (c) The Starry Heavens; (d) Comets and Meteors: their Discovery and their Nature; (e) The Discovery of Planets and Satellites.

Each lecture is illustrated.

## PROFESSOR SAINT-ELME DE CHAMP—

1. La Question religieuse en France.
2. L'Antimilitarisme.
3. La Question de l'Alsace-Lorraine.

## MR. ERNEST CLIFTON—

1. English Architecture.
2. Bergson's Philosophy (single lecture or course of three).
3. Browning.
4. Ancient and Mediaeval Travel.

## PROFESSOR A. P. COLEMAN—

1. A series of individual lectures:  
(1) The Tooth of Time.\* (2) Mountain Building.\* (3) The Ice Age.\* (4) The Rivers of Canada.\* (5) The Canadian Lakes. (6) Rocky Mountain Trails.\* (7) The Opening up of Canada.\* (8) South Africa from Cape Town to Victoria Falls.\* (9) A Voyage around Africa.\* (10) Mexico and its Volcanoes.\* (11) Mount Robson.\* (12) Spitzbergen.\* (13) The Sudbury and Cobalt Mining Regions.\* (14) Fiords and Glaciers of the Pacific Coast and a Journey to the Klondike.\* (15) The Coasts and Mountains of Scandinavia.\*

*\*Illustrated Lecture.*

These lectures may be also given in courses as follows: A course on Physiography—lectures one to six; a course on Geology—lectures one to three; a course of Geographical lectures—lectures seven to fifteen.

2. A course on Dynamical and Structural Geology: (1) The Work of Wind and Weather. (2) The Work of Rivers and the Ocean. (3) The Work of Glaciers. (4) Changes of Level of the Land and Earthquakes. (5) Volcanoes and the effects of Subterranean Heat.
3. A course on Historical Geology: (1) Archaean Time. (2) Palaeozoic Time. (3) Mesozoic Time. (4) Cenozoic Time (5) The Quaternary or Pleistocene Time.
4. A course on the Geography of Canada: (1) The Opening up of Canada. (2) Canadian Lakes. (3) Canadian Rivers. (4) The Archaean Tableland. (5) The Rocky Mountains.
5. A course on some interesting Foreign Lands: (1) South Africa. (2) A Voyage round Africa. (3) Mexico and its Volcanoes. (4) Spitzbergen and the Arctic Regions. (5) Arizona and the Grand Canyon.

**MR. S. A. CUDMORE—**

1. Rural population in Southern Ontario.
2. Trade Unionism in Canada.
3. Half a Century of British Social Progress, 1850-1900.
4. British Social Legislation, 1906-1913.

**PROFESSOR R. DAVIDSON—**

- (1) Babylonia.\* (2) Mohammed: his life, his book, his religion. (3) Egypt.\* (4) Palestine: the land and the book.\* (5) Jerusalem: its story for 4,000 years.\* (6) Turkey and the Turk.\*

**PROFESSOR J. H. FAULL—**

- (1) Mendel and Mendelism. (2) De Vries and the Theory of Mutations.

**REV. A. HAIRE-FORSTER—**

- (1) The New Testament and Recent Research. (2) Dean Swift.

**DR. LACHLAN GILCHRIST—**

- (1) Light Waves and their Uses.\* (2) Other Planets than the Earth as the Abode of Life.\*

**PROFESSOR V. E. HENDERSON—**

- (1) A brief History of Architectural Development in Europe (one or two lectures).\* (2) A Comparison of French and English Architecture during the period from 1000-1500 A.D.\* (3) A Comparison of the Nervous Systems and the Accompanying Habits of Some of the Lower Animals. (4) Austria-Hungary: its Racial and Political Conditions. (5) Architecture of Paris.

*\*Illustrated Lecture.*

## PROFESSOR L. E. HORNING—

1. A course in English Life and Literature (also as single lectures):  
 (a) Old England and Alfred; (b) The Normans and the Court of Henry II; (c) The Triumph of English and Chaucer; (d) Elizabethan England; (e) The Stuarts: the Restoration and Revolution; (f) Romanticism in History and Literature; (g) The Early Victorians; (h) The Later Victorians; (i) To-day and Tomorrow.
2. A course on Canada:—(a) Canadian History, the Salient Features; (b) Canadian Literature; (c) Canadian Education; (d) Canadian Citizenship and Outlook.
3. The Mother Country: (a) The England of To-day; (b) Imperialism; (c) England and Germany; (d) Problems of Anglosaxondom; (e) Canada and the Empire; (f) The Future of England.
4. English Literature of the Nineteenth Century (four to six lectures).
5. Our Mother Tongue (four or more lectures).
6. Goethe and his Faust (one to five lectures).
7. European Topics: (a) The Everlasting Balkans; (b) Teuton, Slav, Oriental; (c) Noble Pages from the German Past; (d) The Germany of To-day.
8. Great Men and Women: (a) Julius Caesar; (b) Luther; (c) Shakespeare; (d) Cromwell; (e) Napoleon; (f) Bismarck; (g) Queen Elizabeth and her Times; (h) Mary Queen of Scots; (i) Victoria and her Times.
9. Great Events: (1) The Discovery of America; (2) The Reformation; (3) The French Revolution.
10. General: (1) War or Peace?  
 (2) The Great Illusion.  
 (3) The Heroism of Peace.  
 (4) The Growth of Freedom.

## DR. CLIFTON D. HOWE—

1. Individual Lectures:  
 (1) The Making of a Tree; (2) The Making of a Forest; (3) The Making of Soil; (4) Insects and Flowers; (5) Plant Societies.
2. A Course of five lectures on the Work of Plants:  
 (1) The Sources of Plant Food; (2) The Feeding of a Plant; (3) How a Plant Grows; (4) Plant Structures in Relation to the Struggle for Existence; (5) Plant Societies.
3. A Course of six lectures on Elementary Forestry:  
 (1) How to Identify Trees; (2) The Making of a Tree; (3) Why Trees Differ in Appearance; (4) The Making of a Forest; (5) The Forests and Forest Climates of Canada; (6) What Forestry Would Mean to Canada.

All illustrated.

\* *Illustrated Lecture.*



## PROFESSOR MAURICE HUTTON—

- (1) The Statesmen of Athens. (2) Greek Virtues and Theories of Life. (3) The Women of Greece. (4) Some Oxford Types (first series). (5) Some Oxford Types (second series). (6) The Wit and Wisdom of Herodotus. (7) Some Aspects of Classical Education. (8) The Roman, the Greek, the Englishman, and the Frenchman (one or two lectures as desired). (9) Plato on University Education. (10) The Antigone of Sophocles. (11) Plutarch. (12) The Tyrants of Greece. (13) Some Educational Controversies. (14) Robert Browning as a Greek Scholar. (15) Hellenism. (16) Some Thoughts on Present Educational Discontents. (17) The Greek Poems of Tennyson. (18) The Cynicism of Herodotus. (19) Secondary Schools and Universities. (20) Free Libraries. (21) Plato's Watch-Dog. (22) Plato and Poetry. (23) A Traveller's Notes in Greece; (24) Paris. (25) Francis Bacon. (26) Things in General. (27) Nature of Things (address to girls). (28) The Five Lamps of Education. (29) Zethus and Ampheon. (30) St. George's Day. (31) St. Patrick's Day. (32) On Schoolmasters. (33) The Press. (34) Canadian and British Undergraduates. (35) National Defence. (36) Platonists and Aristotelians. (37) Canada in the Empire. (38) Matthew Arnold and Oxford. (39) The Advocatus Diaboli and University Education. (40) Plato's Republic and the Book of Job. (41) Militarism and Anti-militarism.

## MR. GILBERT E. JACKSON—

1. A Course of three lectures on the Fall of the Roman Empire: (a) The Empire till the Military Revolution; (b) The Imperial Reconquest of Italy; (c) The Rise of the Mediaeval Church.
2. The History of Forty Years (two lectures); (a) The Great Depression 1873-1896; (b) The New Dearthness 1896-1913.
3. Our Interest in European Peace.
4. Three lectures on the Modern City: (a) The Drift to the Cities; (b) The Population of the Cities; (c) The Problem of the Cities.

## PROFESSOR G. W. JOHNSTON—

1. Pompeii: Life and Art in an Ancient Italian City.\* (2) The Grandeur that was Rome (the ancient city).\* (3) Roman Frontier Fortress Towns: Turin, Aosta.\* (4) The Romans in Southern France.\* (5) The Romans in the Provinces.\* (6) Roman Architecture and Painting (one or three lectures).\* (7) Roman Painting and Sculpture (one or three lectures).\* (8) Roman Portrait Sculpture.\* (9) Roman Art in Metals, Clay, etc.\*

\* *Illustrated Lecture.*



## PROFESSOR D. R. KEYS—

- (1) Alfred, King of the Anglo-Saxons. (2) The Life and Times of Shakespeare. (3) Milton. (4) Scott. (5) Macaulay. (6) Thackeray. (7) Matthew Arnold, The Apostle of Culture. (8) Tennyson, The Making of a Poet. (9) Browning, The Ring and the Book. (10) The American Humorists. (11) Our Debt to Germany. (12) Life in the Fatherland. (13) German Student Life. (14) The History of the English Alphabet. (15) The History of English Spelling. (16) Language and the Study of Language. (17) Tendencies of the Modern Novel. (18) Manifest Destiny and the Study of Geography. (19) The Civilization of the Anglo-Saxons. (20) English Life in the Middle Ages. (21) A Course on the English Essayists from Bacon to Calsworthy. (22) The Study of Shakespeare as a Test of the Times. (23) The Secret of Germany's Success. (24) Town-planning in the Old World and the New. (25) The Lessons of Toronto's History. (26) The Romance of the Study of Language. (27) The Brotherhood of Man as developed in Recent History. (28) The Wider Imperialism.

## PROFESSOR R. E. L. KITTRIDGE—

- (1) Types of Fiction in the Eighteenth and Nineteenth Centuries (six lectures).
- (2) The Romantic Movement in France (five lectures.)

## PROFESSOR W. R. LANG—

- (1) Matter at Low Temperature.\* (2) The Development of the Modern High Explosive.\* (3) The Chemical Industries of Canada.\* (4) Combustion.\* (All these in the Chemical Theatre only.)

## PROFESSOR G. H. NEELER—

- (1) The School Systems of Germany and Ontario. (2) The German University. (3) The German Empire and its People. (4) Germans in America: Their Origin and History.

## PROFESSOR T. R. ROBINSON—

1. Social Ethics. Single lectures or (preferably) courses of three to five lectures on the following subjects. (1) History of Social Institutions: (a) The Family—its origin, its function in social development, its future prospects; (b) The State—primitive, social, organization and lines of progress, development of law and justice; (c) The Churches as a social agency. (2) Origin and Growth of Moral Ideas. History of some of the more important and generally received notions of morals—regard for human life, property rights, truthfulness, etc. The relation of such ethical conceptions to social and political conditions. (3)

\* *Illustrated Lecture.*

Present Day Social Problems: (a) Ethical aspects of modern industrial development; (b) Socialism: its criticism of the existing social order; its philosophy; its proposals; (c) Religious and ecclesiastical aspects of the social problem.

2. Philosophy in Literature. A course of four lectures as outlined below, dealing with the relations of philosophy and of literature to life, and with the relation of philosophy in the technical sense to the expressions of philosophical insight in general literature. (1) What is Philosophy? (2) Some Aspects of the Philosophy of Emerson. (3) Tennyson's Treatment of the Problem of Immortality in "In Memoriam." (4) Charles Dickens' Philosophy of Life. These lectures may also be given separately. Lectures (2), (3) and (4) are intended to amplify and illustrate the principles dealt with in lecture (1).

MR. A. H. D. ROSS—

- (1) The Work of a Forest Engineer. (2) The Railroads' Interest in Forestry. (3) The Dominion Forest Reserves.

MR. A. CUMMING RUSSELL—

- (1) The Making of the Scottish People. (2) The Romance of Scottish History. (3) Scotland and England—A Comparison and a Contrast. (4) The Highlands of Scotland, in the Past and Present. (5) Scotland's Fight for Religious Freedom. (6) Prince Charlie and His Times. (7) The Weird and Supernatural in Scotland. (8) Scottish Scenes and their History and Literature. (9) Scottish Ballads and Scottish Poetry.

DR. JOHN SATTERLY—

- A course of lectures on Heat (illustrated by experiments). (These lectures can be given in the Physics Building only.)

PROFESSOR G. O. SMITH—

- (1) The Roman Occupation of Britain (single lecture.)\* (2) A course of four or five lectures on the same subject (two of them illustrated). (3) Sir Richard Steele (single lecture.) (4) Records of an English family in the 17th century. (5) Monumental Brasses as illustrating English History 1300-1600.\* (6) The Country around Stratford-on-Avon.\* (7) The Cinque Ports.

PROFESSOR G. S. STEVENSON—

1. A Course of ten lectures on the Romantic Movement in English Poetry (Wordsworth, Coleridge, Scott, Shelley, Keats and Byron).
2. A Course of five lectures on Cardinal Newman and the Oxford Movement.
3. A Course of ten lectures on the Social Teaching of Carlyle, Ruskin and Arnold.
4. George Eliot.
5. Charles Lamb.

\* *Illustrated Lecture.*

## PROFESSOR M. W. WALLACE—

1. A series of individual lectures:  
(1) The Ballads of the Scottish Border. (2) James Hogg, the Ettrick Shepherd. (3) The English Puritan Revolution. (4) Sir Thomas More.
2. A course of five or ten lectures on Shakespearian Plays; Antony and Cleopatra (five lectures); Hamlet (five lectures). Other plays of Shakespeare may be substituted for those mentioned above.

## MR. W. S. WALLACE—

- (1) The Norse Voyages to America. (2) The Legal Rights of the French Canadians. (3) The United Empire Loyalists.

## MR. R. HODDER WILLIAMS—

1. A Course of six lectures on the Dramatic Crises of the French Revolution: (1) The Oath of the Tennis Court and the Storming of the Bastille. (2) The March of the Women to Versailles. (3) The Flight of Varennes. (4) The Capture of the Tuileries and the Massacres of September. (5) The Trial of the King and the Fall of the Girondins. (6) The Fall of Danton and the Fall of Robespierre.
2. A short series of lectures on the Unification of Italy (1815-1913.) Individual lectures on Napoleon in Italy, Mazzini, Garibaldi, Cavour, etc.
3. One or more lectures on France and Napoleon I.
4. The Marquis de La Fayette.

## PROFESSOR A. H. YOUNG—

- (1) Goethe's Faust (single lecture or course). (2) Heinrich Heine (single lecture or course). (3) German Life and Customs. (4) King Arthur and the Holy Grail (single lecture or course). (5) Michael Angelo and the Sistine Chapel.\* (6) Madame de Maintenon. (7) Bishop Strachan. (8) John Stuart of Kingston, an early U. E. Loyalist. (9) English, Scottish and Canadian Universities.

### **University Extension.**

The following statute relating to University Extension work was passed by the Senate in April, 1894:

1. A standing committee of seven members of Senate shall be appointed annually for the purpose of carrying on "University Extension" work of a kind similar to that carried on under the same designation in connection with the Universities of Cambridge and Oxford.

2. The committee shall have authority to appoint a secretary, define his duties and fix his remuneration.

3. No part of the expenses incurred for teaching and examining done at "local centres" of instruction, or for secretarial work done under the authority of the Committee, or for any other purpose connected with University Extension shall be a charge on the ordinary revenue of the University.

4. It shall be the duty of the Committee, subject to ratification by the Senate, to appoint teachers and examiners for approved or prescribed courses of study at local centres, and to grant certificates to such students as may have passed the final examinations in each course and complied with other conditions prescribed from time to time by the Committee.

5. It shall be the duty of the Secretary to keep a register, in which shall be entered the name and address of each student who obtains a certificate with a description of the course of study in which he has passed, and such other particulars as the Committee may from time to time order to be inserted.

## CATALOGUE OF SPECIAL EVENTS, 1913-14.

## 1913.

- Aug. 7-14—Twelfth Session of the International Geological Congress.
- Aug. 14—Special Convocation when the Degree of LL.D., *honoris causâ*, was conferred upon the following :—
- Richard Beck, Rector of the Royal Saxonian Academy of Mining, Freiberg, Germany.
- Thomas Chrowder Chamberlain, Professor of Geology in the University of Chicago.
- Willet Green Miller, Geologist of the Province of Ontario.
- J. J. Sederholm, Director of the Geological Commission for Finland.
- Aubrey Strahan, Assistant Director of the Geological Survey of England and Wales.
- P. M. Termier, Director of the Geological Service of France.
- Theodosius Tschernyschew, University of St. Petersburg, Russia.
- Oct. 14—Organ Recital by Mr. F. A. Mouré, Bursar of the University.
- Oct. 15—Lecture by Mrs. S. Arthur Strong, Assistant Director of the British School at Rome, on "The Symbolism of the After-Life on later Roman Sculpture".
- Oct. 24—Lecture by Mr. F. R. Benson on "Shakespeare as a World Force."
- Oct. 29—Organ Recital by Mr. E. C. MacMillan, Mus. Bac., Oxon., F.R.C.O.
- Nov. 5—Special Convocation, when the Degree of LL.D., *honoris causâ*, was conferred upon Sir Rickman John Godlee, President of the Royal College of Surgeons, London.
- Nov. 12—Organ Recital by Mr. J. E. P. Aldous, B.A., Cantab., Hamilton.
- Nov. 17—Lecture on "Egypt in the Time of the Pyramids", by Professor Max Müller, of the University of Pennsylvania.
- Nov. 21—Lecture on "The Activities and Excavations of the School of American Archaeology", by Mr. Edgar L. Hewitt, Ph.D., Director of the School of American Archaeology, Santa Fé.
- Nov. 26—Organ Recital by Mr. G. H. Knight, Mus. Bac. (Manchester).
- Dec. 5—Lecture on "Canada, and the Financial Situation", by Sir George Paish of London, England.
- Dec. 10—Organ Recital by Mr. F. C. Thomas, A.R.C.O., Brantford.

## 1914.

- Jan. 3—Opening of the Private Patients' Pavilion, Toronto General Hospital.
- Jan. 10—Saturday Lecture: "Irish Folk Songs", by Professor Healey Willan.
- Jan. 14—Organ Recital by Mr. Otto James, Toronto.



- Jan. 15—Lecture on "The Ruined Cities of Asia Minor", by David M. Robinson, Ph.D., Johns Hopkins University.
- Jan. 17—Saturday Lecture: "The Wit and Wisdom of Herodotus", by Principal Hutton.
- Jan. 19—Lecture by Mr. Frederick Lessore on "Portraiture in Sculpture".
- Jan. 21—Organ Recital by Mr. C. E. B. Price, A.R.C.O., Hamilton.
- Jan. 24—Saturday Lecture: "The Romance of Agriculture", by Dr. C. C. James.
- Jan. 28—Organ Recital by Mons. J. Arthur Bernier, Quebec.
- Jan. 28—Lecture on "Popular Government" by the Hon. William Howard Taft, ex-President of the United States.
- Jan. 31—Saturday Lecture: "Mohammed", by Professor Richard Davidson.
- Feb. 4—Organ Recital by Mr. Ernest R. Bowles, Toronto.
- Feb. 4—Lecture on "Hellenism and Christianity", by Professor von Dobschütz, Halle Exchange Professor at Harvard University.
- Feb. 7—Saturday Lecture: "The Building Stones of Eastern Canada", by Professor Parks.
- Feb. 11—Organ Recital by Dr. Herbert Saunders, A.R.C.O., Ottawa.
- Feb. 14—Saturday Lecture: "Life in Palestine—Past and Present", by Professor Benzinger.
- Feb. 18—Organ Recital by Mr. J. H. Shearer, A.R.C.O., Montreal.
- Feb. 21—Saturday Lecture: "Dean Swift", by Rev. T. Stannage Boyle.
- Feb. 26—Conférence par M. André Bellessort "La France et le Paris qu'on ne voit pas".
- Mar. 2—Address by Lieut.-Col. Sir William Boog Leishman, Professor of Pathology in the Royal Army Medical College, London.
- Mar. 4—Organ Recital by Mr. T. J. Palmer, A.R.C.O., Toronto.
- Mar. 9—Lecture on "The Dawn of Art", by Professor George MacCurdy, Yale University.
- Mar. 10—Address on "The Drama as a Factor in Social Progress", by Mr. Laurence Irving.
- Mar. 11—Organ Recital by Mr. Fritz Thiele, Toronto.
- Mar. 16—Address on "Medical Research", by Dr. Gustav Monod.
- Mar. 18—Organ Recital by Mr. Charles E. Wheeler, F.R.C.O., London.
- Mar. 19—Opening of the Royal Ontario Museum by H.R.H. The Duke of Connaught, Governor-General of Canada.
- Mar. 19—University College. Dinner of Literary and Scientific Society with Rt. Hon. Sir Wilfrid Laurier as guest of honour.
- Mar. 25—Organ Recital by Mr. F. A. Mouré, Bursar of the University.
- April 9—Meeting of the International Association of Medical Museums.
- April 9—Meeting of the American Association of Cancer Research.
- April 10-11—Meeting of the American Association of Pathology and Bacteriology.
- April 13 to 16—Ontario Educational Association.
- April 16—Lecture on "The Historical Development of Lace-making", by Mr. C. T. Currelley.

**Victoria College.**

1913.

Sept. 10—Opening of Burwash Hall.

Oct. 17—Farewell luncheon to Rev. Chancellor Burwash.

Inauguration of Rev. President Bowles.

Nov. 7—Presentation of Burwash Lectureship Fund.

Nov. 16—Rev. Professor John Burwash. Ob.

1914.

Jan. 16—Hon. George A. Cox. Ob.

Mar. 27—Re-Union of Class of 1889.

**Trinity College.**

1913.

Oct. 1—Farewell service in College Chapel for Rev. V. C. Spencer, B.D., and Miss F. A. Spencer on their departure for Japan.

Oct. —Degree of D.D. (*iure dignitatis*) conferred upon the Very Reverend George Lathrop Starr, Dean of Ontario, and upon Right Reverend Frederic Bingham Howden, M.A., Missionary Bishop of New Mexico.Degree of D.D. (*honoris causâ*) conferred upon the most Reverend Samuel Pritchard Matheson, Archbishop of Ruperts Land, and Primate of all Canada; the Right Reverend John Charles Roper, Bishop of Columbia; the Very Reverend Charles Pressley Smith, Dean of Argyll and the Isles; and the Reverend Charles Allen Seager, Principal of St. Mark's Hall, Vancouver.

June 4—Dinner in Convocation Hall for Graduating Class, and for the members of every decade preceding.

## UNIVERSITY OF TORONTO ASSOCIATIONS AND SOCIETIES.

1913-14.

### ALUMNI ASSOCIATION,

The University of Toronto Alumni Association was organized in 1900. It has thirty-five branches in various parts of Canada and the United States. Its official organ is *The University Monthly*.

Honorary President:—His Honour Sir John M. Gibson, K.C.M.G., M.A. LL.D., K.C., Lieutenant-Governor of the Province of Ontario.

President:—J. C. McLennan, B.A., PH.D.

Vice-Presidents:—T. C. Boville, B.A., C.M.G., Deputy Minister of Finance, Ottawa; George Bryce, M.A., D.D., LL.D., Winnipeg; John M. Clark, M.A., LL.B., K.C., Toronto; E. P. Davis, B.A., Vancouver, B.C.; Otto J. Klotz, LL.D., Ottawa; Stephen B. Leacock, B.A., Montreal, P.Q.; Rev. J. W. MacMillan, B.A., D.D., Hon. Lieut.-Col., Halifax; T. Kennard Thomson, C.E., D.Sc., Secretary-Treasurer, University of Toronto Club of New York, New York.

Secretary-Treasurer:—J. Patterson, M.A.

Executive Council:—Miss C. C. Benson, B.A., PH.D., Miss G. Lawler, M.A., J. A. Amyot, M.B., R. W. Angus, B.A.Sc., M. A. Buchanan, PH.D., W. R. Carr, PH.D., Harold Clark, D.D.S., H. J. Crawford, B.A., R. Davidson, M.A., PH.D., N. W. De Witt, B.A., J. S. A. Graham, M.B., R. A. Gray, B.A., Albert Ham, Mus. Doc., H. E. T. Haultain, C.E., M.I.M.M., H. C. Hindmarsh, B.A., A. L. Langford, M.A., George H. Locke, M.A., PH.D., Chas. A. Moss, B.A., LL.B., Harold Parsons, M.A., M.D., R. A. Reeve, B.A., M.D., LL.D., J. C. Robertson, M.A., J. L. Ross, B.A., J. Squire, B.A., F. N. G. Starr, M.D., G. E. Stevenson, M.A., B. LITT., J. B. Tyrrell, M.A., B.Sc., Gordon Waldron, B.A., Morley Wickett, Ph.D., J. A. Worrell, M.A., D.C.L., A. H. Young, M.A.

**FACULTY UNION.****Organized 1901.****Officers.**

*President*, Robert A. Falconer, M.A., LL.D., D.Litt., C.M.G.

*Secretary-Treasurer*, V. E. Henderson, M.A., M.B.

*House Committee:*

F. B. Allan, Ph.D.

T. L. Walker, M.A., Ph.D.

M. A. Buchanan, B.A., Ph.D.

R. H. Williams, B.A.

L. Gilchrist, M.A.

S. Beatty, B.A.

**STUDENTS' ADMINISTRATIVE COUNCIL.**

The Students' Administrative Council has developed from the Parliament of Undergraduates which was organized in 1905 with a large membership to afford students of all the Colleges and Faculties the privilege of discussing in open debate questions of interest to them. During the last year or two the membership of the Parliament was reduced as the work became more executive. The Council, as now recognized by the University authorities, has the following duties:—

To represent the students on all public occasions and in all matters pertaining to their interests.

To afford a recognized means of communication between the students and the University or Civic authorities.

To promote inter-university relationships; to cultivate a University "esprit de corps" among the students of all Colleges and Faculties.

The Council is responsible for the publication of *THE VARSITY* and *TORONTONENSIS*, for Theatre Night, the Glee Club, and the University Musical Society.

**Officers.**

*President* . . . T. R. Loudon, B.A.Sc.

*Treasurer* . . . S. R. Ross, Science

*Vice-Pres.* . . . A. H. Walker, Wyc.

*Music Org.* . . . S. P. Griffin, Trinity

*Gen. Sec.*, . . . W. T. Kennedy, M.A.,  
Medicine

*Lit. Org.* . . . C. B. Hamil, Univ. Coll.  
*Athletic and Discipline:* A. W. Knox,  
Medicine

*Sec. Comm.*, R. H. Wing, Dentistry

*Representatives.*

A. S. Bourinot . . . University Coll.

H. A. Wood . . . . . Science

G. H. Duff . . . . . University Coll.

F. Sutherland . . . . . Science

F. A. Armstrong . . . . . Victoria

W. J. Houston . . . . . Education

J. G. Lumsden . . . . . Victoria

A. B. Connell . . . . . Forestry

J. McCarthy . . . . . St. Michael's

T. Peckett . . . . . Victoria (Theol.)

C. A. Rae . . . . . Medicine

C. Donald . . . . . Knox

R. B. Hare . . . . . Medicine

C. L. Pattison . . . . . Dentistry

A. S. Miller . . . . . Science

R. C. Duthie . . . . . Veterinary

**THE VARSITY.**

<i>Editor-in-Chief</i> . . . . . A. J. Duncan	Miss Hyatt, Miss O. Ziegler;
<i>Business Manager</i> . . . G. S. Gregory	R. G. McClelland, H. A. Porteous, S. A. Wallace, N. C. Ferguson, C. S. Leckie.
<i>Managing Editors</i> : W. C. Kester (Fall Term); K. C. Drury (Spring Term).	<i>Faculty Representatives</i> :
<i>Assoc. Editor</i> . . . . . A. R. M. Lower	University College Ladies: Miss J. K. Lamont, Miss Dorothy Ferrier.
<i>Circulation Manager</i> . . . . H. Smith	Victoria: C. B. Wood.
<i>Asst. Business Managers</i> : J. W. Jones, J. E. Hill.	Annesley Hall: Miss M. W. Dafoe.
<i>Sporting Editor</i> . . . . . F. J. Foster	Trinity: F. M. Turner.
<i>Assoc. Sporting Editor</i> : C. V. Perry	St. Hilda's: Miss L. Hill.
<i>News Editor</i> . . . . . J. W. Hill	Senior Science: G. J. Mullins.
<i>Art Editor</i> . . . . . M. Denison	Junior Science: J. F. Young.
<i>Exchange Editor</i> . . . . J. M. Sloan	Knox: W. R. MacDonald.
<i>Local Editors</i> : H. C. Myers, R. R. Sheppard, A. M. Thurston, C. C. Grant, H. L. Devlin, H. C. Green, A. R. Willmott, R. W. Downie.	Wycliffe: C. Glover.
<i>Reportorial Staff</i> : A. M. Latchford, J. M. Frawley, A. Cox, G. C. Haddow, W. McL. Clarke, Miss C. Cooper, Miss Ruby Riddle,	Dentals: A. R. Leggo.
	<i>Board of Directors</i> : A. H. Walker, B.A. (Chairman), C. S. McKee, H. N. Macpherson, H. I. Kinsey.

**YOUNG MEN'S CHRISTIAN ASSOCIATION.**

The object of the Association is to lead the men in the University of Toronto to acknowledge Jesus Christ as Lord and Master, and to have them decide on a life's work in His name; to promote Christian character; to develop and train men for aggressive Christian work and service, and generally to promote the physical, mental and spiritual welfare of the student body.

The work during the past few years has grown so much as to be seriously handicapped by the small building and equipment. The Association is looking forward eagerly towards the completion of the new Hart House in order to enlarge its work. The personnel of the Board of Directors insures a sane policy and consequent permanent results in all branches of work undertaken.

**Board of Directors.**

R. A. Falconer, LL.D., D.Litt.	M. H. V. Cameron, M.D., <i>Treas.</i>
John A. Paterson, K.C.	A. W. Briggs, M.A., LL.D.
Geo. H. Locke, Ph.D.	Thomas Bradshaw, Esq.,
J. W. Graham, D.D.	James Ryrie, Esq.
P. Gillespie, M.Sc.	W. Harley Smith, B.A., M.B.
Wallace Secombe, D.D.S.	J. B. Reynolds, B.A.
V. Massey, B.A.	G. A. Warburton, M.A.
F. N. G. Starr, M.B.	A. H. Abbott, M.A., Ph.D.



**Federal Executive Committee.**

<i>President</i> .....W. T. Kennedy	<i>General Secretary</i> ....C. R. Carrie
<i>Vice-President</i> ....R. G. Matthews	<i>Associate Sec.</i> .....R. B. Ferris
<i>Recording Secretary</i> .....A. Hill	<i>Associate Sec.</i> .....F. T. Graham

**REPRESENTATIVES.**

<i>University College</i> .W. J. Gallagher	<i>Applied Science</i> ....G. C. Storey
<i>Victoria College</i> .F. J. T. Maines	<i>Education</i> .....J. D. Robins
<i>Trinity College</i> .....C. Drew	<i>Dental College</i> .....G. Zimmerman
<i>Medicine</i> .....G. C. Anglin	

**CONVENERS.**

<i>Mission Study</i> ....R. G. Struthers	<i>Sunday Services</i> .....F. J. Foster
<i>Life Work</i> .....J. P. Ferguson	<i>Finance</i> .....I. P. McNabb
<i>New Student</i> ....H. K. Detweiler	<i>Book Exchange</i> .....F. Glover
<i>Membership</i> .....E. T. Graham	<i>Student Volunteer</i> .....
<i>Missionary Finance</i> ,.W. R. Reeds	

**THE UNIVERSITY OF TORONTO ATHLETIC ASSOCIATION.**

The Athletic Association is now the paramount body in University athletics, and has entire jurisdiction over the athletic clubs using the University name, and over their finances, members and policy, subject to the University authorities. Henceforth, no financial agreement can be entered into by any such club without the sanction of the Directorate. No expenditure of any kind in connection with any such club can be made without the written order of the Secretary-Treasurer of the Directorate.

<i>Hon. President</i> ..President Falconer	<i>Directors</i> : Prof. G. I. H. Lloyd, Dr.
<i>President</i> .....C. H. C. Wright	W. B. Hendry, W. C. Laird,
<i>Vice-President</i> ...J. C. Maynard	J. C. Maynard, A. E. Cuzner,
<i>Sec.-Treas.</i> ....J. W. Barton, M.D.	V. F. Stock, I. R. Strome.

**Rugby Football Club.**

<i>Hon. President</i> ....Prof. McCurdy	<i>Asst. Sec.-Treas.</i> ...D. A. H. Nelles
<i>Hon. Vice-Pres.</i> R. F. Thompson,	<i>Capt. 1st Team</i> ....J. C. Maynard
B.A.	<i>Mgr. 1st Team</i> .....W. E. Sinclair
<i>President</i> .....C. E. Gage	<i>Mgr. 2nd Team</i> .....R. F. Davison
<i>Vice-President</i> .. . . .T. L. Cory	<i>Mgr. 3rd Team</i> .....A. G. Poupore
<i>Sec.-Treasurer</i> ...J. C. McClelland	

**Track Club.**

<i>Hon. Pres.</i> .....Dr. W. E. Willmott	<i>Manager</i> .....C. V. Perry
<i>President</i> .....E. Ralph Hooper,	<i>Sec.-Treasurer</i> .....W. A. Blake
B.A., M.B.	<i>Asst. Sec.-Treas.</i> , A. E. MacDonald
<i>Vice-President</i> ....W. E. Brown	

**Association Football Club.**

<i>Hon. President</i> .....Prof. Johnston	<i>Sec.-Treasurer</i> .....W. J. Preston
<i>President</i> ....V. F. Stock, B.A.	<i>Manager</i> .....A. Pue, B.A.
<i>Vice-President</i> ...J. A. Woodward	<i>Captain</i> .....W. C. Givens
<i>Hon. Coach</i> , W. Blackwood, B.A.Sc.	

**Gymnasium Club.**

<i>President</i> .....A. Gardiner	<i>Sec.-Treasurer</i> .....H. R. Smith
<i>Vice-President</i> .....C. V. Scott	

**The Gymnasium.**

The Gymnasium, including gymnasium proper, locker rooms and bath, is open daily from 8.30 to 6 p.m. to all members.

The following is the time-table for the work in the gymnasium:

Gymnasium Class, Monday, Wednesday and Friday, 5.15 p.m.

Fencing Class, Tuesday and Thursday, 5 p.m.

Boxing Class, Wednesday, 5 p.m., and Saturday, 10.30 a.m.

Swimming Class, Daily, 3-6 p.m.

Swimming Life-Saving Course, Tuesday and Thursday, 5 p.m.

Basket Ball, Tuesday, 5 p.m., and Saturday, 4 p.m.

Class for Students requiring special attention, Tuesday and Thursday, 3 p.m.

Work in the gymnasium will begin promptly the first week in October. During the Fall Term a course of instruction will also be given in rifle drill, bayonet, quarter-staff, dumb-bells, wands, etc., and instruction in boxing and wrestling may be obtained from Sergeant Williams. All members wishing information as to further regulations are requested to apply to the physical director.

Members must receive a physical examination from the physical director before using the gymnasium.

**Basketball Club.**

<i>Hon. President</i> .....T. R. Loudon	<i>Mgr. 1st Team</i> .....W. J. Preston
<i>President</i> .....C. V. Scott	<i>Mgr. 2nd Team</i> .....C. Simpson
<i>Vice-President</i> ....H. B. Preston	<i>Captain</i> .....H. A. Thompson
<i>Sec.-Treasurer</i> .....E. A. Twidale	

**Fencing Club.**

<i>President</i> .....H. M. Campbell	<i>Secretary</i> .....C. C. Anderson
<i>Vice-President</i> .....A. S. Bourinot	

**Swimming Club.**

<i>President</i> .....F. S. Rutherford	<i>Secretary</i> .....H. M. Peck
<i>Vice-President</i> ....L. B. Simpson	<i>Manager</i> .....B. N. Simpson

**Hockey Club.**

<i>President</i> .....	W. C. Laird	<i>Capt. 1st Team</i> .....	J. B. Hanley
<i>Secretary</i> .....	I. R. Strome	<i>Capt. 2nd Team</i> ...	T. W. MacDowell
		<i>Capt. 3rd Team</i> .....	W. Milne

**Curling Club.**

<i>Honorary President</i> .....	Robt. A. Falconer
<i>President</i> .....	W. M. Treadgold
<i>Vice-President</i> .....	L. Gilchrist
<i>Secretary-Treasurer</i> .....	W. A. Kirkwood

**Lacrosse Club.**

<i>Hon. Pres</i> .....	Dr. W. B. Hendry	<i>Sec.-Treasurer</i> ....	H. K. Hamilton
<i>President</i> .....	H. Zinn		

**Tennis Club.**

<i>President</i> .....	C. C. Storey	<i>Committee</i> .....	J. S. Reid, G. Dashwood
<i>Sec.-Treasurer</i> .....	E. A. Twidale	<i>Captain</i> .....	R. Dashwood
<i>Asst. Sec.-Treas</i> ...	W. B. Dickson		

**Cricket Club.**

<i>Hon. President</i> .....	Prof. DeLury	<i>Vice-President</i> ....	S. H. Crawford
<i>Hon. Vice-Pres</i> ....	Professor Lloyd	<i>Sec.-Treasurer</i> .....	J. R. Woods
<i>President</i> .....	J. C. Maynard		

**Harrier Club.**

<i>President</i> .....	C. V. Perry	<i>Secretary-Treasurer</i> ...	W. A. Steele
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**Boxing and Wrestling Club.**

<i>President</i> .....	K. E. Burgess	<i>Secretary</i> .....	T. J. Williams
<i>Vice-President</i> ..	W. S. McClinton		

**OFFICERS OF THE 2nd FIELD COMPANY CANADIAN ENGINEERS.**

<i>Officer Commanding</i> .....	Major S. P. Biggs.
<i>Captain</i> .....	T. C. Irving.
<i>Lieutenant (Acting Adj.)</i> .....	S. H. Fellowes.
<i>Lieutenant</i> .....	G. M. Bramfitt.
<i>Lieutenant</i> .....	E. Pepler.
<i>Medical Officer</i> .....	J. W. Barton, M.D.

**UNIVERSITY OF TORONTO RIFLE ASSOCIATION**

<i>Hon. President</i> ...	Pres. Falconer	<i>Hon. Captains:</i>	Prof. A. T. DeLury,
<i>Hon. Vice-Pres.</i> ,	Prof. J. R. Cockburn		Prof. G. H. Needler, Prof. W. L. Miller.
<i>Captain</i> ...	Prof. V. E. Henderson	<i>Hon. Sec.-Treas.</i> ,	Mr. A. F. Coventry
		<i>Secretary</i> .....	J. H. Fenton

*Lieutenants:*

J. A. Dickson.                      A. R. Leggo.                      A. E. Macdonald.  
    R. L. Hughes,                      W. G. Smelser.

*Sergeants.*

W. J. Ruston....Victoria College	A. T. Weir.....Trinity College
H. Brandt.....Chemical Bldg.	J. G. Murray....University Coll.
J. G. Pilkey.....Dental College	J. P. Henderson...University Coll.
F. L. Mills.....Applied Science	D. Brown.....Medicine
D. G. Hagarty....Applied Science	W. R. Macdonald...Knox College
T. Robinson.....Biol. Bldg.	A. C. S. Trivett....Wycliffe Coll.

*Staff Representatives.*

Dr. A. G. Huntsman...Biol. Bldg.	Father Roche...St. Michael's Coll.
Prof. W. L. Miller....Chem. Bldg.	Prof. G. Chambers.....Pharmacy
Mr. A. T. Laing....C. & M. Bldg.	Dr. W. A. Kirkwood..Trinity Coll.
Prof. W. E. Willmott..Dental Coll.	Mr. L. H. Corbett....Univ. Coll.
Mr. G. N. Bramfitt...Educ. Bldg.	Prof. N. W. DeWitt, Victoria Coll.
Mr. W. C. Blackwood..Eng. Bldg.	Prof. W. H. Hallam..Wycliffe Coll.
Prof. R. B. Thompson..Forestry	Mr. L. Gilchrist.....Physics Bldg.
Bldg.	Dr. J. C. Watt.....Anat. Bldg.
Prof. R. Davidson...Knox College	

**MATHEMATICAL AND PHYSICAL SOCIETY.**

<i>Hon. President</i> ...S. Beatty, M.A.	<i>4th Year Rep.</i> ...C. G. Found, '14
<i>President</i> .....J. McKellar, '14	<i>3rd Year Rep.</i> ...Miss O. E. Morrison,
<i>Vice-Pres</i> ...H. B. Armstrong, '15	'15
<i>Sec.-Treas</i> ...A. D. Jamieson, '15	<i>2nd Year Rep.</i> ...W. E. Austin, '16
<i>Cor. Sec.</i> ...Miss M. M. Garbutt, '14	<i>1st Year Rep.</i> ...J. A. Pearce, '17

**CHESS CLUB.**

<i>Hon. Pres.</i> .....Principal Hutton	<i>Rep. in Arts</i> ....G. A. L. Gibson
<i>President</i> .....D. B. Coleman	<i>Rep. in App. Sci.</i> .....E. P. Muntz
<i>Sec.-Treasurer</i> .....D. A. Keys	<i>Rep. in Medicine</i> ...G. J. Ferrier
<i>Curator</i> .....A. Turnbull	

**WOMEN'S DRAMATIC CLUB.**

For some years this club has been under the instruction of F. H. Kirkpatrick, Ph.D., of the Conservatory of Music School of Expression.

<i>President</i> ....Miss M. J. Fraser	<i>Secretary</i> .....Miss G. E. Hendry
<i>Vice-Pres</i> .....Miss A. Edwards	<i>Treasurer</i> .....Miss I. Cassidy

**INTERNATIONAL POLITY CLUB.**

FOUNDED 1913.

**OBJECTS:—**

1. To encourage the study of international relations.
2. To cultivate a sympathetic understanding of the customs and ideals of other nations.
3. To discuss problems relating to armed aggression.
4. To consider means of settling international disputes without war.
5. To co-operate for the furthering of those aims with similar organizations in other universities.

**ADVANTAGES:—**

1. Monthly Supper Meetings addressed by prominent public speakers of international reputation.
2. Discussion Groups, in which all members have an opportunity to exchange views on international problems in a systematic and effective manner.
3. A Club Library of books, pamphlets, periodicals and clippings for use in study, discussion and debate.
4. An Organization which demonstrates the intellectual unity of the University by embracing all faculties and colleges.
5. Communication and association with similar clubs throughout the world.

*Executive Committee.*

<i>President</i> .....	W. M. Johnson, B.A.
<i>First Vice-President</i> .....	G. E. Jackson, B.A.
<i>Second Vice-President</i> .....	C. A. McKay, B.A.
<i>Secretary-Treasurer</i> .....	Paul Goforth, (U.C.).
<i>Assistant Secretary</i> .....	A. J. Duncan, (U.C.).
<i>Graduate Representatives</i> .....	{ Miss Helen McMurchie, B.A. H. E. B. Platt B.A.
<i>Undergraduate Representatives</i> .....	{ Miss Dorothy Ferrier, (U.C.) T. W. Cornett, (Vic.). J. Dibblee, (Science).

**MUSICAL ASSOCIATION.**

<i>Hon. President</i> , Prof. A. H. Abbott	<i>Secretary</i> .....S. P. Griffin
<i>President</i> .....E. C. MacMillan	<i>Treasurer</i> .....G. H. Duff
<i>Vice-President</i> .....Miss K. Wade	<i>Councillors</i> ....Miss M. McLennan G. B. Frost



## UNIVERSITY COLLEGE STUDENT SOCIETIES.

1913-14.

### YOUNG MEN'S CHRISTIAN ASSOCIATION.

The Association was organized in 1873, and incorporated in 1892. No permanent quarters were available until the erection of the present building in 1886.

Membership in the Association consists of all those in the College who purpose to live and work for the extension of the Kingdom of Righteousness among men, especially the men of this University, and who in endeavouring to carry out this purpose accept Jesus Christ as Saviour and leader. For the support of the work of the Association a fee of \$1.00 is levied.

The Y.M.C.A. aims to organize the religious forces of the College. It promotes the study of the Bible, and the study of social conditions in non-civilized countries as well as in the more congested parts of our own city. It attempts to keep before the student both for his college days and in his after-life, the Christian Ideal of Service.

#### OFFICERS.

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1913-14

The varied character of student life in Victoria, apart from the work of the class-room, laboratory and library, may be gathered from the following list of the societies organized and conducted by the students of Victoria:

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(The "Literary", established 1857; the "Jackson", established 1873; Reorganization, 1893.)

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*Spring Term.*

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## TRINITY COLLEGE STUDENT SOCIETIES.

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The *Trinity College Review* is published once a month throughout the academic year. The annual subscription is \$1, payable with the College bills in October.

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<i>Senior "Varsity" Representative</i> .....	J. G. Mullins.
<i>Junior</i> <i>"</i> <i>"</i> <i>"</i> .....	J. F. Young.

The Society meets every second Wednesday during the academic year. Papers are read, and discussions are held on engineering subjects. The Society publishes a journal monthly during the year, containing the best papers read at the meetings. A supply department is conducted by the Society, on a co-operative plan, through which instruments, drafting supplies, stationery, etc., may be purchased at a low cost.

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The Society meets every second Thursday evening during the academic year for the discussion of papers relating to mechanical and electrical engineering problems too technical for consideration in the Engineering Society. The membership is limited to members of the senior and final years.

**THE INDUSTRIAL CHEMICAL CLUB.**

<i>Honorary President</i> .....	Dr. Ellis.
<i>Honorary Vice-President</i> .....	Prof. J. W. Bain.
<i>President</i> .....	W. E. Phillips.
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<i>Secretary-Treasurer</i> .....	C. C. Anderson.
<i>Fourth Year Representative</i> .....	O. G. Lye.
<i>Third Year Representative</i> .....	L. G. Glass.

The Industrial Chemical Club was organized in 1909 and consists of graduates and undergraduates of Departments 5 and 6. Its object is to promote the study of industrial chemistry and chemical engineering. Illustrated lectures preceded by an informal dinner and short musical program, are held fortnightly, and on the following day an excursion is made to one or other of the industrial chemical concerns located in the city or vicinity.

**ARCHITECTURAL CLUB.**

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<i>President</i> .....	W. C. Skinner.
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**STRUCTURAL CLUB.**

<i>Honorary President</i> .....	Prof. C. R. Young, B.A.Sc.
<i>President</i> .....	C. A. Meadows.
<i>Vice-President</i> .....	H. M. Smith.
<i>Secretary-Treasurer</i> .....	F. W. Douglas.
<i>Official Photographer</i> .....	H. P. Wilson.

The Structural Club was organized in November, 1913. The membership is composed of Fourth Year Civil Engineering students taking the Structural Engineering option. The object of the Club is to study the broader aspects of Structural Engineering. Meetings are held semi-monthly, which are addressed by prominent engineers. The addresses are invariably followed by lively and instructive discussions. Another phase of the Club's activity is the conducting of trips of inspection to engineering works in the city.

**ATHLETIC ASSOCIATION.**

<i>Honorary President</i> .....	Prof. C.H.C. Wright.
<i>President</i> .....	E. B. O'Connor.
<i>Vice-President</i> .....	D. B. Gardner.
<i>Secretary-Treasurer</i> .....	C. W. Pennington.
<i>Fourth Year Representative</i> .....	H. W. Wagner.
<i>Third Year Representative</i> .....	L. S. Adlard.
<i>Second Year Representative</i> .....	R. W. Downey.
<i>First Year Representative</i> .....	G. A. Webb.

The Athletic Association has full control over all athletic clubs using the name of the Faculty of Applied Science. The Executive Committee has power to suspend any one from the privileges of membership in the Association for any breach of its regulations, and controls the finances of all athletic clubs in the aforesaid Faculty. The annual membership fee of this Association is fifty cents.

No other moneys are collected for the support of athletics in the Faculty of Applied Science without the sanction of the Executive Committee.

**Rugby Football Club.**

The Mulock Cup, which was presented by Sir Wm. Mulock, M.A., LL.D., to the University of Toronto Rugby Football Club for inter-college competition, brings out each year a large number of contestants from the University and affiliated colleges.

<i>Honorary President</i> .....	T. R. Loudon.
<i>President</i> .....	I. R. Strome.
<i>Manager senior team</i> .....	J. P. Cavers.
<i>Captain senior team</i> .....	H. W. Wagner.
<i>Manager junior team</i> .....	W. W. Ritchie.
<i>Captain junior team</i> .....	C. Smythe.

**Association Football Club.**

In order to encourage Association Football on the College campus, the Faculty of the University of Toronto presented a cup, known as the Faculty Cup, to the Inter-College Association Football Club for annual competition among University and affiliated colleges.

<i>Honorary President</i> .....	C. H. C. Wright.
<i>President</i> .....	E. B. O'Connor.
<i>Manager</i> .....	E. L. Bedard.
<i>Captain</i> .....	V. R. Pfrimmer.

**Hockey Club.**

The trophy which is competed for annually among the Colleges in hockey is known as the Jennings Cup, and is the gift of the late W. T. Jennings, Mem. Inst. C.E.

<i>Honorary President</i> .....	C. R. Young.
<i>President</i> .....	E. B. O'Connor.
<i>Manager senior team</i> .....	W. G. Millar.
<i>Manager junior team</i> .....	H. C. Rose.
<i>Captain senior team</i> .....	L. T. Hayman.
<i>Captain junior team</i> .....	V. R. Pfrimmer.

**Track Club.**

<i>Honorary President</i> .....	Prof. L. B. Stewart.
<i>President</i> .....	C. V. Perry.
<i>Secretary-Treasurer</i> .....	R. W. Downie.

**Basketball Club.**

<i>Honorary President</i> .....	Prof. J. McGowan.
<i>President</i> .....	E. A. Twidale.
<i>Manager of Seniors</i> .....	W. C. Skinner.
<i>Manager of Juniors</i> .....	C. K. Hoag.

**YOUNG MEN'S CHRISTIAN ASSOCIATION.**

The Y.M.C.A. of the Faculty of Applied Science was organized January 27th, 1905, and forms an integral part of the University of Toronto Y. M. C. A., which is a Federation of the associations of the various Colleges and Faculties of the University. The object of the Association is to develop a true Christian manhood and to help the students in whatever way possible.

<i>Honorary President</i> .....	Prof. J. W. Bain, B.A.Sc.
<i>President</i> .....	S. Shupe.
<i>Treasurer</i> .....	Porter.
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